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National Governors Association

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- Learn about emerging national trends and their implications for states, so governors can prepare to meet future demands.

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Executive Summary

With concerns over job creation and business growth holding a prominent—and persistent—position on policy agendas today, governors are increasingly calling on state agencies to support economic growth. It's not just economic and workforce development agencies that governors want on the case. Some governors are including state arts agencies in this all-hands-on-deck approach and are putting in place policies and programs using arts, culture, and design as a means to enhance economic growth.

This report focuses on the role that arts, culture, and design can play in assisting states as they seek to create jobs and boost their economies in the short run and transition to an innovation-based economy in the long run.

In particular, arts, culture, and design can assist states with economic growth because they can:

1. Provide a fast-growth, dynamic industry cluster;
2. Help mature industries become more competitive;
3. Provide the critical ingredients for innovative places;
4. Catalyze community revitalization; and
5. Deliver a better-prepared workforce.

Globalization and the changing economy have affected individual states differently, but all are searching for ways to support high-growth industries, accelerate innovation, foster entrepreneurial activity, address unemployment, build human capital, and revive distressed areas. Using the five roles as a framework, state leaders—governors, economic development officials, and state arts agencies—have a way to intentionally and strategically make arts, culture, and design an important part of an economic growth agenda. States have already undertaken initiatives that are highly relevant to that agenda. Grouping them by the five roles listed above, this report explores some of their most promising efforts.

Framed by blast furnaces, a crowd gathers for Musikfest at the Levitt Pavilion at SteelStacks, an arts and cultural campus developed on the site of the former Bethlehem (PA) Steel plant. Bethlehem and other towns like it have used the arts to reinvent and revitalize their communities following the loss of major manufacturing.

Photo courtesy of ArtsQuest, photo by Keith Huylerbroeck.

Introduction

With concerns over job creation and business growth holding a prominent—and persistent—position on policy agendas today, governors are increasingly calling on all state agencies to support economic growth. It's not just economic and workforce development agencies that governors want on the case. Governors are asking research universities, community colleges, transportation departments, and health care agencies to sharpen their strategies and capacities for generating long-term economic prosperity. They are asking energy offices, budget offices, and procurement offices to be more attuned to the success or failure of local businesses, technology ventures, or job training programs.

More and more governors are including state arts agencies in this all-hands-on-deck approach, putting in place policies and programs to use arts, culture, and design as a means to enhance economic growth.

This report shows how states are making—and can make—arts, culture, and design a compelling part of their economic solutions. It focuses on five ways for state leaders—including governors, economic development officials, and state arts agencies—to strategically incorporate arts, culture, and design into an agenda to boost growth in both the short and the long term.

More and more governors are including state arts agencies in this all-hands-on-deck approach, putting in place policies and programs to use arts, culture, and design as a means to enhance economic growth.

Economic Challenges Facing States

Since the recession began in 2007, the United States has undergone a major economic contraction, with the loss of over 7 million jobs and a 23-percent drop in new business creation.[1] One of the most worrisome aspects of the current economic situation is that it combines both long- and short-term problems. Growth will need to accelerate sharply for the United States to undo the damage caused by one of the worst recessions in modern times. At the same time, the country faces long-term trends that include the following:

- **The rest of the world, and in particular leading economies in Asia, is gaining in the innovation race, creating the capacity to compete for knowledge-intensive industries.** Current economic predictions, with few dissenters, are that in the next 30 years, China's gross domestic product (GDP) will grow to a total far larger than that of the United States.[2]
- **Technological innovation and global markets are volatile, creating new and unpredictable opportunities as well as threats to individual businesses and entire industries.** Entrepreneurs and competitors can now come from almost anywhere, including economies such as India and China that once were closed. Many of them can reach global markets from the day they open their doors, thanks to the falling cost of communications.

- **The most talented individuals are migrating to a small number of cities that are most likely to maximize innovation and entrepreneurial talents and skills.** The columnist Thomas Friedman has observed that the world is "flattening," with more countries able to participate in the global economy thanks to improvements in communications, advances in education, and other factors. The world is flattening, but it is also becoming "spiky" with innovation hubs, as companies, universities, workers, policymakers, and sources of capital seek close and frequent contact to enhance opportunities for innovation and lower the costs of starting businesses, and be where they have better access to a diverse range of inputs, including worker skills.
- **Employment is changing, with work divided into specialized tasks in ways that have driven demand for flexible partnerships, as well as part-time, contingent, and remotely accessed labor.** Today's knowledge work is done collaboratively in teams, with team members often spread across multiple locations, but also with team members clustered geographically to facilitate the face-to-face interactions among people, firms, and organizations that are required to innovate and to compete in a global economy.
- **The United States is not keeping up with the rising demand for advanced skills.** The need for knowledge workers, to innovate and create new products and services that solve real problems, is a major force driving the world economy. The U.S. workforce will continue to grow until 2020, but under current trends, workers will not have the right skills for the available jobs.[3]

Although the combination of short-term and long-term challenges is affecting individual states differently, all are taking strong and thoughtful steps to restore job creation and build new bases for growth. Their steps range from the practically urgent to the strategically profound, and they seem to be gravitating toward five areas:

- Identifying and then supporting high-growth, entrepreneurial firms and globally-oriented industry clusters;
- Creating new growth opportunities for mature industries;
- Building places that will attract and foster innovation and businesses;
- Finding new uses for old properties, new functions for declining districts, and new economic opportunities for growing cities and regions; and
- Constantly updating workforce skills.

Governors have correctly called on their economic development leaders, workforce agencies, and education institutions for much of the response, both short term and long term. But even if economic-oriented agencies and policies must do the heavy lifting, states are finding that, with economic woes at the center of the public's concerns, all state agencies must ask themselves these questions:

- What is our role in confronting the economic challenges facing our state?
- What is our role in creating jobs, catalyzing innovation, and building new paths for growth?
- How do we engage with the state's economic development and workforce systems—not just to pull out of the recession but to promote the strong growth that is critical to provide good jobs?

State economic development officials and education leaders can in turn ask themselves: How do we mobilize parts of government that may have remained on the sidelines of previous economic development discussions?

Overcoming Challenges Using Arts, Culture, and Design

The merit of an all-hands-on-deck approach becomes readily apparent when one considers the case of arts, culture, and design. Not traditionally in the domain of economic development, this trio has many potential benefits for boosting the economy. As described in the following sections, governors and states are finding that arts, culture, and design can be important components of a comprehensive strategy for growth. They touch the economy at crucial leverage points, including innovation, entrepreneurship, employment, and revitalization. An arts, culture, and design strategy, coupled with other strategies, can provide states a competitive edge in five important ways:

1. It can provide a high-growth, dynamic industry cluster;
2. It can help mature industries become more competitive;
3. It can provide critical ingredients for innovative places;
4. It can catalyze community revitalization and civic enrichment; and
5. It can deliver a better-prepared workforce.

New Engines of Growth

Five Roles for Arts, Culture and Design

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Photo courtesy of David Shopper, Essential

Photo courtesy of David Shopper, Essential

Photo courtesy of David Shopper, Essential

Photo courtesy of Liz Linder
Design by Adam Simha for MKS Design Cambridge, Massachusetts

Pictured here are a variety of innovative products originated by Massachusetts designers. The Design Industry Group of Massachusetts (DIGMA) promotes the state's varied design industries.

Photo courtesy of Vessel

Photo courtesy of Edward Krent of KrentDESIGN

Providing a Fast-Growth, Dynamic Industry Cluster

The concept of the business cluster has become increasingly important in state economic development strategies. More than 20 years ago, Michael Porter, of Harvard Business School, highlighted the importance of clusters in his book *The Competitive Advantage of Nations*. Porter's findings and subsequent studies have important implications for both corporate and government strategy.[4] Some of the key findings:

- Firms concentrated in regional clusters supported by institutions providing education, training, and finance and marketing services experience higher rates of job and wage growth than comparable firms not embedded in such clusters. In such places firms compete, but also work together and with other organizations, to make the region a repository of specialized expertise, technology, institutions, and talent in the given field. The ability to rapidly mobilize resources such as talent, research and development capabilities (R&D), venture capital, and a wide range of relationships, from the tight proximity of great universities, large companies, start-ups, and the ecosystem that connects them, is a tremendous advantage.
- Clusters are important to states and regions because strong clusters are associated with higher growth in both employment and wages, ideal conditions for innovation and entrepreneurship, and strong survival rates among start-up firms. A good strategy to drive economic growth, then, is to pursue the development of clusters, especially in high-wage, high-growth industries.[5]
- Because creating a new cluster can take decades, states must try to speed up the process by identifying existing and emerging clusters in the economy and helping them improve their competitive strengths. One way to help clusters with competitive advantage is to figure out which of the ingredients necessary for success are missing locally and how they can be supplied. Another way is to help all the potential participants in a cluster connect with one another.
- Ultimately, supporting a cluster is about cultivating a well-developed ecosystem, or "habitat," of the type that Silicon Valley embodies and that Austin and San Diego have created over the last two decades or so. It means helping with anything that creates a benefit that is captured not just by a single company, but by an entire community, to help the cluster grow and compete globally.

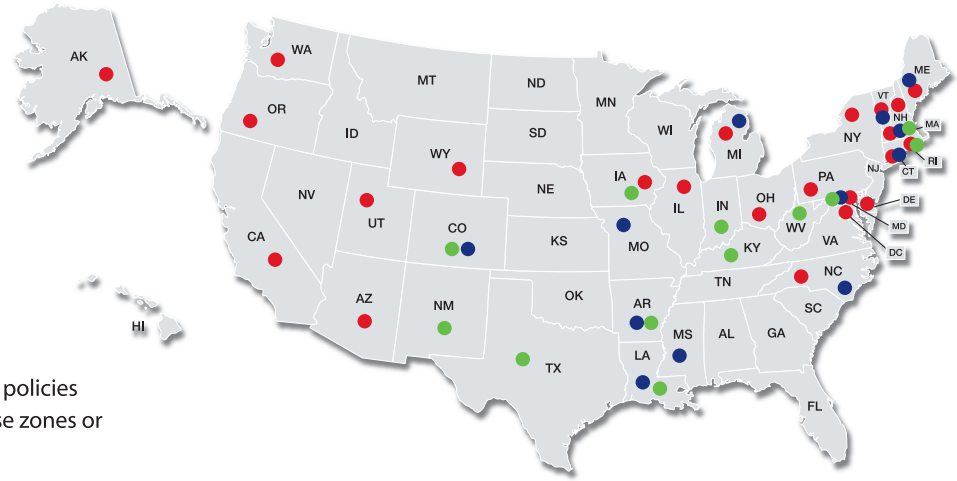
Republican and Democratic governors alike have supported the development of clusters in their states. Their initiatives pay a great deal of attention to science and technology industry clusters (e.g., information technology, biotechnology) because they tend to have high potential to fuel economic growth and global competitiveness. Other areas of emphasis are clean energy, nanotechnology, and computer

The creative cluster includes not only the traditional visual artists, cultural performances, and nonprofit institutions, but also such large economic sectors as entertainment, fashion, publishing, and broadcasting, which are among the fastest-growing and most export-oriented sectors of the American economy.

STATE STRATEGIES ACROSS THE U.S.

The number of states that include creative industries and the arts in their economic policy portfolio has increased dramatically in the last decade. Systematic data tracking, integrated planning and legislation are three strategies that have grown significantly in recent years.

- Using index systems or other uniform data collection systems to monitor cultural employment, participation, revenues and other key metrics over time.
- Adopting statewide economic development plans that designate and integrate the arts, culture or design as strategies for spurring economic growth.
- Enacting legislation or other formal policies designed to foster cultural enterprise zones or creative districts.



gaming. Increasingly, states also are treating creative individuals, institutions, and businesses as a creative industry cluster. The creative cluster includes not only the traditional visual artists, cultural performances, and nonprofit institutions, but also such large economic sectors as entertainment, fashion, publishing, and broadcasting, which are among the fastest-growing and most export-oriented sectors of the American economy.

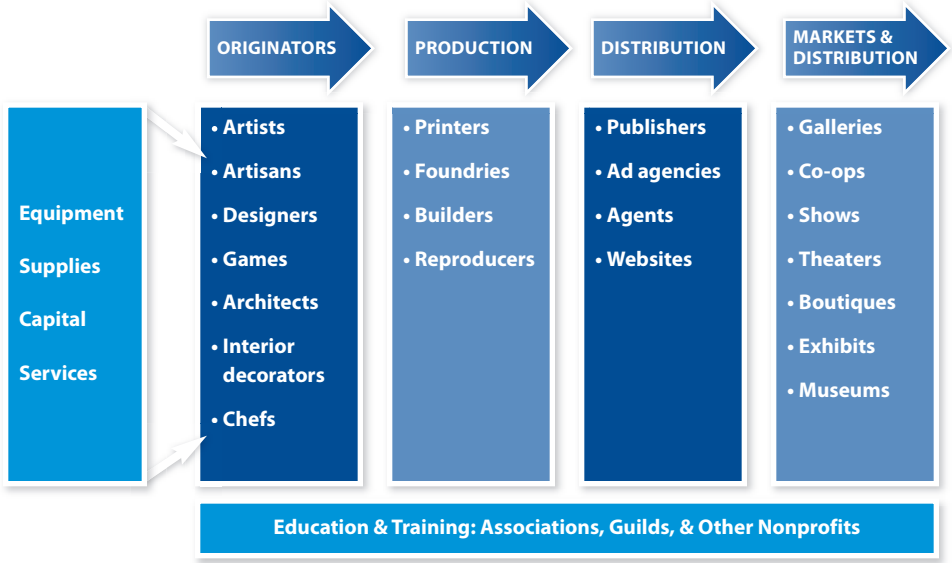
Targeting Creative Industries for Economic Development

States that are treating arts, culture, and design as a cluster are finding an important source of growth. **Arkansas, Colorado,** and **Mississippi** are among them. Recent analysis in these three states found the creative industry the third-largest cluster in Arkansas, the fifth-largest in Colorado, and among the fastest-growing clusters in Mississippi.

Those states now consider their creative industry cluster a vital part of their economic development strategy. Their initiatives are being jointly or collaboratively developed and implemented by state arts councils, economic development agencies, and community colleges and universities. Accordingly they show how such agency collaborations could work in other states that want to identify and support high-growth industry clusters.

Arkansas's 2009 strategy "to increase creative capacity and competitive advantage" is the combined work of the Arkansas Arts Council, Arkansas Science and Technology Authority, and Arkansas Association of

FIGURE 1. The Breadth of the Creative Economy in Arkansas—Originators, Producers, Distributors, and Beyond



SOURCE: Regional Technology Strategies, *Unveiling the Creative Economy in Arkansas*, 2009.

Two-Year Colleges. The creative economy, which includes the arts and businesses that produce and distribute design-intensive goods, is the third-largest industry cluster in the state (illustrated in Figure 1). The 2009 strategy report, *Creativity in the Natural State*, established five goals for growing and enhancing the state's creative economy:

- Strengthening recognition of and support for the creative economy within the state's economic development community;
- Nurturing the development of creative talent and the pipeline of creative workers;
- Promoting the growth and profitability of creative enterprises;
- Using creative talent and assets to increase the competitiveness of other key clusters in Arkansas;
- Supporting and expanding the state's creative infrastructure.

To implement those goals, the report recommends a variety of activities:

- Creating a statewide creative economy leadership council;
- Creating an annual grants fund for innovative arts, culture, or design-based projects;
- Mapping career paths in creative occupations and enterprises;
- Expanding the place of art and design in higher education;
- Assisting creative companies with market development;
- Providing artists and artisans with technical and financial assistance;
- Promoting and encouraging creative entrepreneurs;
- Further developing cultural tourism;
- Linking creative enterprises with traditional industries to help the traditional industries become more competitive; and
- Supporting and expanding the specialized infrastructure that underpins the creative industries.

The initiative has sparked action all over the state. State university extension services have become involved in marketing their areas' cultural amenities. A Creative Economy Consortium has formed. Several local creative skills training programs have emerged. Governor Mike Beebe released a $500,000 appropriation in 2011 and an additional $1.3 million in 2012 to fund grant projects managed by the Arkansas Arts Council that use culture and heritage collaborations to complement the state's goals for its creative economy.[6]

Colorado's 2008 cluster analysis found more than 186,000 jobs directly associated with creative enterprises and creative occupations, about 4 percent of the total jobs in the state. Of significance for economic development efforts, the creative sector was Colorado's fifth-largest employment cluster in 2007, nearly as large as biotechnology/biomedical, information technology, and telecommunications. Colorado's creative base extends to new media technologies, outdoor clothing and equipment design, green products, and craft food and beverages. And above all, between 2002 and 2007 the creative cluster grew faster than most other clusters.[7]

Seeing the need to articulate plans for nurturing those creative industries, in 2009 former Governor Bill Ritter created an advisory panel of more than 60 creative industry leaders to recommend strategies. The panel co-chairs were the lieutenant governor, the director of the

Colorado has adopted a statewide plan to foster economic growth through the arts, culture, and creativity. The plan identifies five policy priorities and 29 specific strategies for strengthening the state's creative industries and workforce. *Photo courtesy of Colorado Creative Industries, State of Colorado.*

Colorado Office of Economic Development, and the director of the Denver Botanic Gardens. The panel recommended, for example, making existing business financing and support systems more accessible to creative businesses to help them start up or grow, recruiting new creative businesses, and developing networking and professional development opportunities to encourage and support creative enterprises and creative workers.[8]

In response to the panel's recommendations, Governor Ritter introduced, and the legislature passed, four pieces of legislation to help make the creative sector a driver of economic growth. One created the Creative Industries Division within the Colorado Office of Economic Development and International Trade, by merging the Office of Film, Television and Media; the Colorado Council on the Arts; and the Art in Public Places Program. It renamed the arts council as "Colorado Creative Industries." Two more bills clarified existing laws to make incentives for film production in Colorado more usable and to apply a 1-percent set-aside for public art to all capital construction projects funded with state dollars, regardless of funding mechanism. The fourth change encourages all public schools to provide education in the visual and performing arts and directs the state board of education to recognize the importance of the arts in future graduation guidelines.

Economic development planning in Colorado has further integrated the arts into its overall strategy for state advancement during Governor John Hickenlooper's administration. *The Governor's 2011 Colorado Blueprint* plan for economic development includes the arts, culture, and creative industries in the state's vision for the future and in the strategies the state will pursue to foster economic growth. Encouraging localities to draw on the arts, the plan articulates, as an outcome measure, that Colorado municipalities will "specify growth of creative industries and arts and cultural activities in their long-term economic development strategic plans."[9] With this new plan, the creative industries have joined aerospace, renewable energy, biotech, and tourism as industries targeted in the budget and planning documents of the Office of Economic Development.

In 2011, **Mississippi** released a strategy titled *Realizing the Economic Potential of Creativity in Mississippi*, following a joint effort that included the Mississippi Development Authority, the state's lead economic development agency, and the Mississippi Arts Commission. The goals and strategies recommended in the 2011 report range from promoting entrepreneurship and small business growth among creative firms, to promoting cross-disciplinary creative networking and using creative career programs to increase school retention rates.[10]

Supporting Artists and Designers as Entrepreneurs

States are recognizing artists and designers as entrepreneurs and innovators. Artists, designers, entertainers, and other "creatives" are likely to be self-employed, and they are constantly creating new products and delivering them to market.[11] Armed with start-up funding, business training, and professional development support—resources that states regularly provide to entrepreneurs and small businesses in other sectors—artists can expand their markets and add greater value to the economy. To that end, states have changed small business assistance programs to make them more accessible to artists and offered training programs to artists to improve their business and marketing skills.

For instance, the **South Carolina** Arts Commission has created a program to fund new arts-based businesses started by South Carolina artists. As part of the state's Artists' Ventures Initiative, artists can apply for grants of up to $5,000 to launch a new venture or significantly alter an existing business. Proposals are reviewed by an advisory committee that includes businesspeople as well as experienced artist entrepreneurs. The projects selected become part of a virtual incubator that brings grantees together for professional development and expert advice.[12] In 2011, seven artists received grants through the Artists' Ventures Institute for a total state investment of $35,000.[13] The arts commission also connects artists to a state-supported business training pro-

Armed with start-up funding, business training, and professional development support—resources that states regularly provide to entrepreneurs and small businesses in other sectors—artists can expand their markets and add greater value to the economy.

Artist Ventures grants from the South Carolina Arts Commission encourage sustainable business development by entrepreneurs such as printmaker Jim Creal, who launched a new product line using a faster lithography process to yield higher profits.

Photo courtesy of the artist and the South Carolina Arts Commission.

gram—FastTracSC—that uses a nationally recognized curriculum to teach aspiring entrepreneurs how to create, manage, and grow a successful business. Artists learn from seasoned entrepreneurs and work alongside aspiring entrepreneurs from other sectors.[14]

The **Montana** Arts Council helps individual artists and small arts organizations develop their microenterprises through the Business Preparation Initiative, which includes services to build skills and knowledge in marketing, finance, fundraising, audience development, and legal and leadership or governance issues. The Montana Artrepreneurs Preparation (MAP) program provides networking, business planning, and market development services to support the employment and sales success of artists and artisans in Native American communities and rural areas. The Montana Arts Council recently collaborated with the Ravalli County Economic Development Authority to deepen this program in four Ravalli County communities, using funds from the U.S. Department of Agriculture's Rural Community Development Initiative (RCDI). A total of $175,105 in RCDI funds will support training and networking for creative entrepreneurs in Ravalli County and develop a cadre of trainers to extend the business development services to the rest of the state.[15]

Assets for Artists, a program funded in part by the **Massachusetts** Cultural Council, is an innovative matched savings grant program to support financial and business training opportunities for low- to moderate-income artists. This program uses classic low-income support systems, such as Individual Development Accounts and small business training, but targets the programs to artists and creative sole proprietors. By meeting savings goals and by completing the required training, participating artists can receive grant funds as a savings match for "working capital" to invest in their work as an artistic microenterprise, or receive down payment assistance for the purchase of a home.[16]

Other states have focused on helping artists find and expand markets for their work. For example, with funds from the **Oregon** Arts Commission's Arts Build Communities (ABC) grant, Trillium Artisans, a nonprofit community economic development program in Portland, worked with 37 low-income craftspeople to strengthen their businesses through product reviews, monthly meetings, workshops, and classes. Meetings covered everything from reaching customers through social media, to creating a business identity, to building economic independence for artisans. Of 35 low-income artisans who had been Trillium members for longer than one year in 2009, 96 percent achieved at least a 25-percent increase in sales within the first year.[17] Trillium's efforts to market its members' products on sites such as Etsy.com and World of Good by eBay translated into sales increases of 111 percent between 2008 and 2009. For "green" craftspeople, the increase was twice as great.[18]

In **New Hampshire,** Artist Entrepreneurial Grants have allowed artists to develop marketing materials, create new websites, and upgrade existing websites for online sales. Late-career professional artists received support to mentor recent graduates or early-career artists. Artists receiving those grants have noted that the funds, although small in amount, have made a significant impact on promoting their work and improving their businesses.[19]

The **Maine** Arts Commission and the Maine Department of Economic Development are collaborating sponsors of Juice, a conference that weaves together the arts, technology, and entrepreneurship. The 2007 Juice 1.0 Conference focused on attendees' learning, exchanging ideas, and sharing success stories, as well as helping to shape strategies for Maine's future. The Juice 2.0 Conference, held in 2009, included a "pitch session," where start-ups and businesses were introduced to potential investors and banks. Participants made elevator pitches of their business ideas to a panel of experienced investment professionals. The winner of the pitch contest was eligible for a $25,000 infusion of capital, and runners-up received $2,500 each in start-up funding.[20] One winner was the Maine Float Rope Company, which takes the floating ropes that Maine lobstermen traditionally used, but which are landfill intensive and going out of style in the lobster business, and designs them into intricate and colorful doormats.

Artist cooperatives foster creative collaborations and are useful means for artists and creative microenterprises to bring their products to market, to share spaces and distribution expenses, and to pool resources for risk management. A nationally recognized example of an artist cooperative is **Alaska's** Oomingmak Musk Ox Producers' Cooperative, a grassroots business network owned by approximately 250 Alaska Native women. The women knit garments from "qiviut"—the downy-soft underwool of the arctic musk ox. The cooperative has converted this indigenous resource into a highly marketable product, providing supplemental income and supporting economic independence for women and families in remote, isolated Alaskan villages. The co-op produced nearly 4,500 items last year. For families in Alaska villages—where few year-round jobs exist and milk and heating oil can cost $6 or more a gallon—the money earned through knitting makes a huge economic difference.

To facilitate the development of such artist cooperatives, the **Georgia** Council for the Arts has produced a technical assistance guide to developing and operating artist cooperatives as a creative industry development tool. The state arts agencies in **Arizona, Arkansas,** and **Tennessee** have also invested in a variety of artist cooperatives to help them expand their networks and markets.

PROVIDING A FAST-GROWTH, DYNAMIC INDUSTRY CLUSTER: IN BRIEF

To boost economic growth, states are…

- Examining the economic importance of the creative industry cluster within the state by looking at the geographic proximity of creative enterprises, creative occupations, and associated institutions;
- Finding that the creative cluster is a vital source of jobs and income, as well as a way to distinguish the state in the highly competitive 21st-century economy;
- Crafting strategies to promote the growth and profitability of creative enterprises, as part of the state's economic development strategy;
- Including state arts councils and similar organizations as part of the state's economic development infrastructure; and
- Reviewing the business incentives, financing programs, and entrepreneurial assistance available in the state and refining guidelines to make them more available to the state's artists and creative businesses.

New Engines of Growth

Five Roles for Arts, Culture and Design

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Tupelo Manufacturing Inc. is a contract furniture manufacturer specializing in high quality seating for hotel, office, and restaurant use. All contract furnishings are produced in Tupelo, Mississippi.

Photo courtesy of Stuart Rosenfeld.

Helping Mature Industries Become More Competitive

States have several efforts under way focusing on industry renewal and retooling that connect well with arts, culture, and design. Those efforts also provide an important opportunity to further cooperation between economic development and arts and cultural agencies. One such effort concerns manufacturing, with states (including eight states participating in an NGA Center for Best Practices policy academy) focused on how to integrate inventing, designing, and producing high-value-added products into existing and emerging manufacturing industries. Another effort concerns tourism. The Western Governors' Association 2011–2012 initiative focuses on ways to strengthen the Western economy by promoting growth of the outdoor recreation and tourism sectors.

In many industries, producing the most important new products and services depends on maintaining the worldwide technological lead. But that kind of leadership also depends on deeply creative individuals who can imagine how people can use things that have never been available before and who can create ingenious marketing and sales campaigns, write books, design cars, and imagine new kinds of software that will capture people's imagination and become indispensable to millions.[21]

"Seventy to 80 percent of new product development fails not for lack of advanced technology but because of a failure to understand users' needs," according to research by economist Eric Von Hippel.[22] Leading companies such as Apple and Google have achieved major market success by using design to make their products user-friendly, address consumer needs, and drive innovation in areas from product development to advertising practices.

Leading companies such as Apple and Google have achieved major market success by using design to make their products user-friendly, address consumer needs, and drive innovation in areas from product development to advertising practices.

INNOVATION: ENGINEERED VERSUS DESIGNED

"Good design takes creativity," says David Kelley, founder of IDEO, a firm that has been widely recognized for quality in design and that is one of the most visible product designers in the world, especially the world of high technology. "There is a basic difference between problem solving and actually creating beyond what the problem calls for."

- *Engineering as problem solving:* "In this view, engineers are problem solvers. 'This device breaks down when you use it for a long time, so we'll beef up the strength of this weak section.' This is problem solving."
- *Design as creating:* "The designer, on the other hand, has a passion for doing something that fits someone's needs, but that is not just a simple fix. The designer has a dream that goes beyond what exists, rather than fixing what exists."

SOURCE: "The Designer's Stance," an interview with David Kelley by Bradley Hartfield, *Bringing Design to Software,* Stanford University and Interval Research Corporation, 1996.

Building Design Infrastructure to Support Transforming Industries

The creative edge that other industries receive by collaborating with designers depends on a strong design industry and infrastructure. States are working to support the design sector and its interaction with other industry sectors. For example:

- Design **Alabama,** an organization that grew out of the Alabama State Council on the Arts, matches design professionals with small communities that do not have funds or access to design professionals.
- The **New York** State Architecture, Planning and Design Program, run by the New York State Council on the Arts, provides grant funds for nonprofits and local government agencies to engage the services of architecture, planning, design, or historic preservation professionals.
- The **Rhode Island** Design Innovation Grant, a $6,000 competitive award, is made annually to a Rhode Island designer to implement a highly creative design idea.
- The **Utah** Arts Council DesignArts Program sponsors and mounts an annual exhibition to feature work submitted by Utah designers and promote excellence in the diverse fields of design.

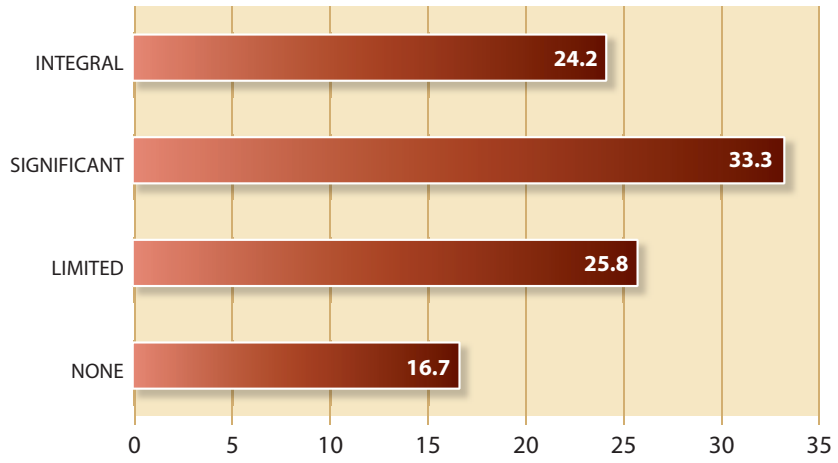
Other nations are recognizing the overriding importance of design in maintaining economic competitiveness. For example, Finland emerged from the 1990s recession determined to integrate design into a national system of encouraging innovation in industry. In the space of a decade, Finland launched a national strategy called "Design 2005!" to improve design quality, to promote extensive use of design to increase competitiveness, and to cultivate the quality of the living environment. An essential part of its approach is the continuous creation and application of new discoveries, new knowledge, new ideas, and new designs.[23] A Design Start program was launched in 1999 to enhance product design, particularly in small and medium-sized companies, by funding designers to act as consultants to manufacturing enterprises, service businesses, and start-ups.[24]

Using Arts and Design to Strengthen Manufacturing

U.S. manufacturers are making sophisticated use of design to remain competitive, but they also recognize more such support and enhancement is critical to their success. Regional Technology Strategies Inc. has conducted surveys of manufacturing companies in **Arkansas, Massachusetts, Mississippi, North Carolina,** and **Wisconsin** to understand the importance of design in manufacturing. (The Massachusetts survey was conducted in collaboration with Mt. Auburn Associates.) In survey responses from 301 manufacturers in Arkansas, Mississippi, North Carolina, and Wisconsin, nearly a quarter of the manufacturers attributed most of their sales to product design, and fully two-thirds said that aesthetics and design were significant or integral to their competitiveness.[25] As shown in Figure 2, most manufacturers in Arkansas said that they believed design was significant or integral to their success.

In the survey of **North Carolina** manufacturers, the respondents also saw design as important to developing new

FIGURE 2. Respondents' Ratings of the Importance of Aesthetic Design to Competitiveness in Arkansas, 2007 (percentages)



SOURCE: Regional Technology Strategies, *Unveiling the Creative Economy in Arkansas,* 2009.
Provided by Stuart Rosenfeld, Regional Technology Strategies

markets and products and making their firms more profitable. After financial and operational management, design was listed as the third-most-important factor in business success. That importance led 21 percent of the manufacturers to spend more than $500,000 annually on design.[26]

Icelandic Skis, Colorado, is a multidimensional ski company that represents a lifestyle of art, adventure, creativity, passion and innovation, American craftsmanship, top of the line materials, and cutting-edge graphic art. The company's founder began his dream of designing skis in his parents' garage in Evergreen, Colorado. *Photo courtesy of www.designbycolorado.net.*

Mississippi's 2011 report on the state's creative economy includes an analysis of the importance of design to manufacturers, as well as specific recommendations for how Mississippi can enhance the competitiveness of its industry through use of art and design. The study found that design was important to the state's manufacturers, but it also found that manufacturers often use design firms or freelancers based out of state. To help manufacturers better understand the importance of creativity and the value of design, the report recommends including design technical assistance among the state's Manufacturing Extension Partnership services and providing state tax credits for investments in design capabilities. It also recommends that the Mississippi Manufacturers Association establish a council on manufacturing design or a design association within the organization to provide resources for businesses with respect to applying design to manufacturing.[27]

Other states and localities are also creating strategies that help connect local manufacturers and businesses to the region's creative talent pool. In Berkshire County **Massachusetts,** the Berkshire Creative's program, the Creative Challenge, connects manufacturers and businesses to local designers, engineers, and creative workers with the aim of re-visioning of existing products, generating new ideas and concepts for existing production methods, and introducing brand new product lines. This initiative was born from an initiative outlined in the 2007 Berkshire Creative Economy Report, "Design It Here, Make It Here," which recommended a campaign to assist and encourage manufacturers in the county to take on the production of "creative products."[28]

Along with the Berkshire County effort, the Design Industry Group of **Massachusetts** (DIGMA)—an initiative launched by statewide design industries in 2007—connects the multidisciplinary design community with state policymakers and leading industries. DIGMA works to unite various design disciplines into a single cluster, to raise the visibility of that cluster, and to promote design as a solution to companies that are looking to rethink, restructure, and re-launch. A DIGMA-convened Design Industry Roundtable led a task force facilitated by the Boston Society of Architects to develop a position paper and recommendations for integrating design excellence standards into the bidding process and the development of public capital projects.[29]

After financial and operational management, design was listed by manufacturers as the third-most-important factor in business success.

DIGMA also convened the "Mass Made–Re-Inventing Manufacturing in Massachusetts" and "Design Means Business" conferences, which targeted leaders in manufacturing and business to demonstrate the power of design.

In **North Carolina,** the Piedmont Triad Partnership, a nonprofit, regional economic development organization, established the Triad Design Consortium (TDC) to spread the application of design thinking to make all Piedmont Triad companies more competitive. TDC supports the work of four emerging clusters of opportunity: logistics and transportation, furnishings, nanotechnology, and regenerative medicine. The Triad Design Consortium also runs the Triad Design Leadershop, a series of lectures and interactive workshops that bring design professionals together with leaders in industries.

The **Rhode Island** School of Design (RISD)—one of the nation's leading design schools, chartered by the state—pairs aspiring designers with business and engineering students for a holistic product development process. The team approach has resulted in a wide variety of products, many of which have been patented and brought to market. Recent projects include a wireless information device for travelers, developed in partnership with Nokia; a real-time video entertainment system for cars, sponsored by General Motors; a low-cost incubator for the Cambridge, Massachusetts, nonprofit Design that Matters; and direct-to-consumer products in the athletic wear, entertaining, and travel markets.[30]

Using Arts, Culture, and Design to Strengthen Tourism

Tourism, like manufacturing, is an example of an industry that can connect well with arts, culture, and design to increase its value and market. Arts and culture add value to the tourism industry by rooting it in the authenticity of place and leveraging a region's unique culture and food.

Half of all Americans take at least one trip every year, and 80 percent of those travelers are looking for cultural or heritage tourism opportunities.[31] According to the Urban Institute, the market for traditional arts and for travel linked to the cultural uniqueness of particular places has grown substantially over the last several decades and will continue to grow for the foreseeable future.[32]

Oregon tourism, which employs 90,000 Oregonians and contributes $7 billion to the state's economy each year, emphasizes cultural tourism and authentic local products.[33] The Oregon Arts Commission, for example, provides cultural tourism grants to support activities undertaken by arts or tourism groups, with the aim of increasing tourism by promoting arts-related offerings in a community or region. Activities include targeted marketing for arts and cultural events, the development of packages or special promotions, and the development of new uses of media and technology for arts and culture.[34]

In **Georgia,** the Council for the Arts and Georgia Tourism combined resources to offer Tourism Product Development (TPD) grants in fiscal year 2012. Twenty-three grants totaling $200,000 supported the integration of the arts into tourism activities to boost visitor traffic, employment, and revenues. TPD grants were awarded to a variety of community, cultural, county, and municipal attractions and supported the development of mutually beneficial partnerships among the arts, industry, and local governments.[35]

Inspired by **North Carolina**'s Handmade in America and Homegrown Handmade programs, initiatives in states such as **Indiana, Kentucky,** and **Montana** are helping artists raise the market profile of their traditional crafts and export them across state lines.

Numerous states—including **Connecticut, Kentucky, Massachusetts, New Mexico, North Carolina, Ohio, Pennsylvania, Tennessee,** and **Washington**—have developed specific tours or trail programs to attract out-of-state visitors and promote their distinctive cultural amenities. The New Mexico Arts Trails program is a place-based arts, economic development, and cultural tourism project that allows artists to stay in their home communities while increasing their sales and income, promoting entrepreneurship. New Mexico Arts also funds several arts trails in rural New Mexico communities. Based on the indigenous cultural traditions of each area, the trails celebrate

Arts and culture add value to the tourism industry by rooting it in the authenticity of place and leveraging a region's unique culture and food.

Tourists and filmmakers, as well as residents, are drawn to events such as the 2009 South Dakota Film Festival, which featured the Native American Drum and Dance Ensemble.

Photograph by Chad Coppess, courtesy of the South Dakota Department of Tourism www.travelsd.com 2009.

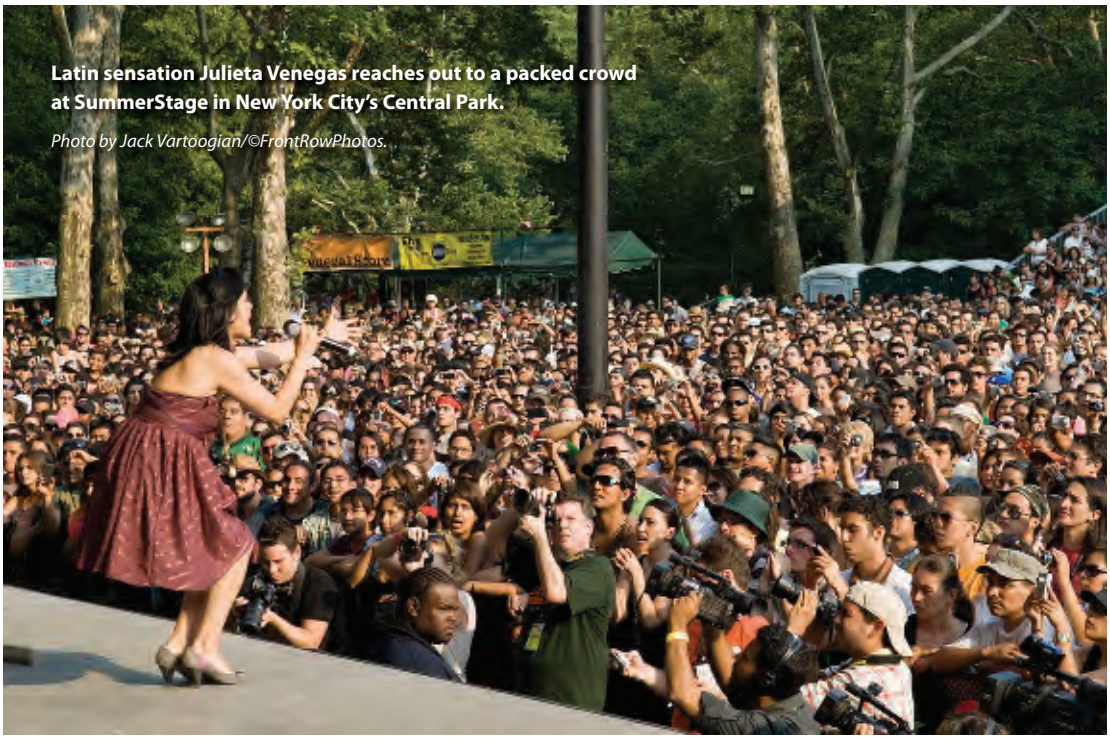
the heritage of New Mexico for residents and visitors alike, providing culture-based, sustainable income for families and generating tourism revenue.[36]

Regional cuisine is a distinctive and marketable product that can draw tourists and be the basis of numerous small enterprises in communities large and small. The **Mississippi** Arts Commission promotes a variety of distinctive culinary attractions that range from rural roadside eateries to exquisitely appointed restaurants featuring creative cuisine, as well as the Mississippi Delta Hot Tamale Trail, which promotes the history, tradition, and culture of hot tamales from Tunica to Vicksburg.[37] Similarly, **Iowa**'s Place-Based Foods initiative is promoting culinary tourism throughout the state.[38]

South Dakota produces a guide to showcase and market its authentic products and unique culture and history. *South Dakota—Our Culture and Heritage* is published jointly by the South Dakota Arts Council, the South Dakota Office of Tourism, and the South Dakota State Historical Society. It includes information about art galleries, ethnic diversity, heritage parks, historic architecture, landmarks, live music, Native American experiences, artist studios, and theaters.

Festivals and fairs are major attractions that draw visitors to a state and stimulate spending. According to recent research, 102 million individuals attend arts and cultural festivals annually across the nation.[39] States have adopted a variety of approaches to take advantage of the traffic. For instance:

- The **Virginia** Commission for the Arts and Virginia Tourism Corporation collaborate to offer a special grant program to help Virginia festivals, museums, and other arts organizations with the expenses of their tourism promotion efforts.



Latin sensation Julieta Venegas reaches out to a packed crowd at SummerStage in New York City's Central Park.

Photo by Jack Vartoogian/©FrontRowPhotos.

The majority of festivals (77 percent) take place in towns with fewer than 250,000 residents. Of those festivals, 39 percent occur in towns with fewer than 10,000 people, making them keystone events for small and mid-sized communities.[40] Pekin, **North Dakota,** is a good example. Pekin is a tiny community in Nelson County, in eastern North Dakota, with a population of about 80 people. The small farming town was not originally known for its arts scene, but its reputation changed after the incorporation of a highly successful art show into the city's annual Pekin Days celebration. Strong attendance at the art show helped the city acquire a federal Community Development Block Grant and U.S. Department of Agriculture Forest Service funding for renovations of the art show auditorium, providing year-round benefits to the community. Art show revenue also helps the city maintain the community center, two city parks, and the volunteer fire department. The art show has also sparked new economic activity, including construction of a new motel, and has increased the revenues of establishments such as gas stations, restaurants, and grocery stores.

- **Minnesota**'s Festival Support program, offered by the Minnesota State Arts Board, supports the employment of local artists in festivals across the state. Since the 2009 passage of the state's Clean Water, Land and Legacy Amendment referendum, that program is part of a statewide strategy to make the arts more accessible to residents and visitors.
- The **Missouri** Arts Council provides Downtown Revitalization and Economic Assistance for Missouri (DREAM) arts grants for catalytic arts projects such as festivals, exhibitions, or special performances that draw significant audiences and contribute to economic revitalization in small towns across the state.

HELPING MATURE INDUSTRIES BECOME MORE COMPETITIVE: IN BRIEF

To boost economic growth, states are…

- Exploring the links between the creative talent in the state—artists, designers, new media entrepreneurs—and other important clusters to deepen those connections and improve the competitiveness of traditional industries, such as manufacturing;
- Creating dedicated units and expertise within community colleges, manufacturing extension centers, and agricultural extension services that focus on design; that is, they are adding design capabilities in firm assessments and providing access to technical assistance in the design of products, packaging, and branding; and
- Boosting tourism by leveraging and marketing the unique culture and food of regions.

New Engines of Growth

Five Roles for Arts, Culture and Design

SOLUTIONS
american
GLOBALIZATION
Challenges
innovation
innovation
CREATE
revitalization
creativity
skills
business
competitiveness
job creation
Design
states
PRESERVATION
Research
Networking
internet
packaging
CULTURE
ARTS
manufacturing
economy
SOCIAL
architecture
Healthcare
technology
science
cities
education
industries

Her Secret is Patience **is a monumental outdoor sculpture suspended 100 feet above the new Phoenix Civic Space Park. The sculpture's illuminated nighttime presence changes constantly. Roughly 150 workers were involved in designing, engineering, fabricating and installing the piece.**

Janet Echelman, artist; Paul Deeb, VOX, lighting

Photo by Craig Smith, courtesy of the Phoenix Office of Arts and Culture.

Providing Critical Ingredients for Innovative Places

The most successful American places in the 21st century are likely to be innovation hubs. They are locations that support an open innovation business model, foster co-location, and promote easy and constant interaction among many different industries and a wide variety of creative workers, from artists to scientists to engineers. It may seem ironic in today's global economy, but place has become more important than ever.

As Table 1 suggests, manufacturers of computer games, digital media, robotics, and even medical instruments and devices are looking for locations and physical spaces that facilitate regular interaction of people to exchange ideas and know-how and create new responses. As companies go outside for new ideas and research and development (R&D) help, they depend on an external ecosystem of customers, inventors, designers, entrepreneurs, financiers, lawyers, and others to support their efforts. That can be less expensive than the traditional "closed innovation" model, but it requires finding locations where an external ecosystem of institutions that support creativity and innovation exists (see Table 2). Michael Porter puts it this way: "Managers must make R&D locational choices strategically, recognizing that there tend to be only a few true innovation centers in each industry and that even modest improvements in the innovation environment can hold dramatic consequences for competitive advantages."[41]

Part of San Diego's strategy to become one of the top biotech hubs in the country—a goal that it attained in less than a generation—was the creation of a densely packed, two-mile area that includes the University of California at San Diego

States are redesigning spaces and establishing networks to link artists more strategically with one another and with creative businesses and property developers.

TABLE 1. When Face-to-Face Interaction is a Location Priority

Product Age	Examples of Product	Location Priorities	Cost Sensitivity	Preferred Location Examples
Young	New media: digital arts, Internet product development, web site design	• Urban lifestyle • High face-to-face interaction • Availability of talent from multiple disciplines: designers, computer technicians, advertising, telecommunications	Less sensitive to cost	Silicon Gulch, Silicon Alley
	Biotech: new prescription drugs, diagnostic	• Concentration of universities • High face-to-face interaction • Availability of talent from multiple disciplines: life sciences, health care, nanotechnology	Less sensitive to cost	San Diego, San Francisco,
Mature	Small electronic goods manufacture, athletic shoes	Low cost entry level labor Low cost space Affordable low-income housing	Heavy sensitivity to cost	Far East, less-developed countries

SOURCE: Adapted from Cohen, N. *Business Location Decision-Making and the Cities: Bringing Companies Back,* April 2000.

(UCSD), Scripps Research Institute, the Salk Institute for Biomedical Studies, and dozens of private companies. Proximity reduces the overall costs of collaboration and makes it easier for the collaborators—both businesses and individual workers—to respond to new opportunities quickly and retool or reconfigure as needed. As a vice president of the Salk Institute said, "We can throw a rock and hit UCSD. I can hit a golf ball and hit Scripps. Everything is within walking distance. That means more heads get together, and we do a lot of collaboration."[42] San Diego is now home to 75 research institutions, 600 biomedical and life sciences companies, and 1,900 companies in information technology, wireless communications, and software.

TABLE 2. An External Ecosystem of Institutions that Support Innovation and Creativity

Form of Innovation	Institutional Sources
Research and development	University research Federal research labs
Product and process improvements	Community colleges University extension services Small business centers
Design and differentiation	Colleges of arts and design Consortia of artists and entrepreneurs

SOURCE: Adapted from National Governors Association, *Cluster-Based Strategies for Growing State Economies,* Washington, D.C., 2007.

The challenge to states, then, is to transform regions into innovation hubs. That means building a critical mass of creative talent; facilitating co-location, or geographic clustering of complementary industries; and removing barriers to collaboration, whether physical, social, or cultural.

A number of states are supporting the development of more and better innovative places generally and innovation hubs specifically. Three recurring themes have appeared in this effort:

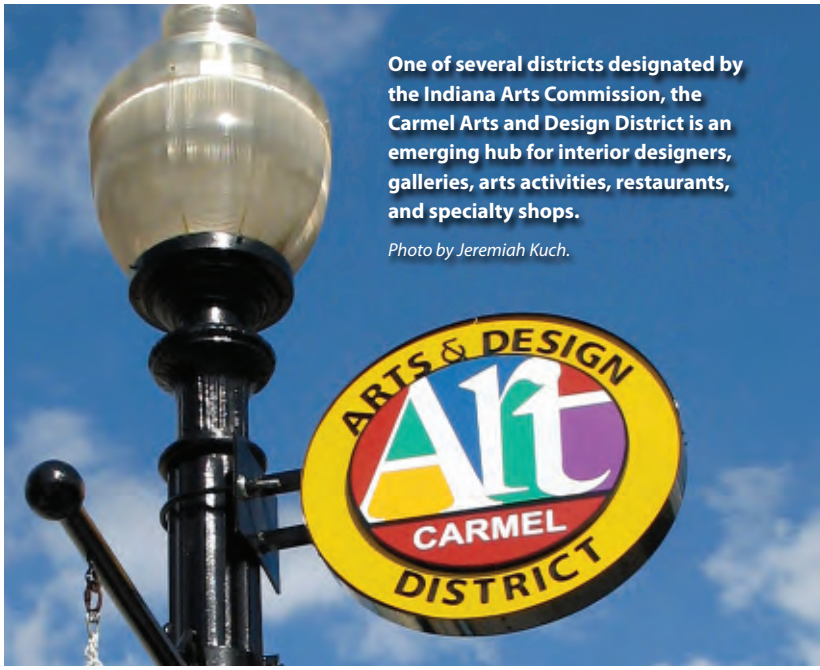
- Launching cultural districts and arts enterprise zones.
- Creating spaces for artists and other creative talent to cluster, interact, and thrive.
- Integrating arts, culture, and design into innovation hubs that encourage collaboration.

Launching Cultural Districts and Arts Enterprise Zones

Cultural districts are zones designated to gather cultural or artist ventures (both nonprofit and commercial) to stimulate economic development. They are often supported through targeted incentives, tax credits, and promotional activities. At least 12 states have formal cultural district policies, including **Arkansas, Colorado, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, New Mexico, Rhode Island, Texas,** and **West Virginia**.

Numerous other states have authorized localities to set up their own incentives and tax structures to facilitate local cultural districts. More than 130 of these districts have received state designation, each with its own unique structure and character.

Indiana has a statewide cultural districts program, managed by the Indiana Arts Commission, which currently includes the Tippecanoe Arts and Cultural District in Lafayette, the Carmel Arts and Design District, and the Bloomington Entertainment and Arts District (BEAD). BEAD—locally translated as "beats, eats, arts, digs, and shops"—seeks to bring the business and creative sectors together to advance commerce and culture, build community, and spur economic development. The district has numerous galleries, artist studios, creative businesses, civic groups, and organizations that serve youth populations. BEAD emphasizes



One of several districts designated by the Indiana Arts Commission, the Carmel Arts and Design District is an emerging hub for interior designers, galleries, arts activities, restaurants, and specialty shops.

Photo by Jeremiah Kuch.

Visitors to the Bethesda, Maryland, Arts and Entertainment District enjoy numerous theatres, galleries and arts events that attract customers for local retailers, restaurants and other businesses.

Photo courtesy of the Bethesda Urban Partnership.

Spaces to Cluster, Interact, Thrive

- ☐ A former auto dealership was converted into Textile Center by women knitters, weavers, and other fiber artists from all over the state.
- ☐ Artists convene in an old tavern and farmhouse in a suburb of the Twin Cities.
- ☐ The downtown business community of Northfield sold a building to the Northfield Arts Guild for one dollar in an effort to revitalize the downtown area.
- ☐ An old downtown high school in Duluth was closed and transformed into a place where artists now live and work in its 48 units.
- ☐ Fergus Falls, a very small town, created an eight-unit artist live/work building with a gallery in its shuttered downtown Hotel Kaddatz.

SOURCE: Ann Markusen, 2008

the high concentration of creative assets and related activities to strengthen and enhance the overall economic development of the community.[43]

In January of 2012, the state of **Maryland** released an economic analysis of its Arts & Entertainment Districts program. This statewide initiative enables municipal and county governments to apply for state certification and become eligible for incentives that encourage the establishment of businesses, artists and cultural organizations in designated local areas. The new study, commissioned by the Maryland State Arts Council, a division of the Department of Economic and Business Development, found that businesses within Maryland's 19 certified arts districts supported an annual average of 1,621 jobs and $49.8 million in wages between FY2008 and FY2010. Arts & Entertainment districts supported an annual average of $147.3 million in state gross domestic product during those same years. Taxes generated by new businesses and visitor spending at district events generated total tax revenue exceeding $37 million.[44]

Wilmington, **Delaware**, is developing a new Lower Market Design District (LOMA) to connect creativity and commerce and create an area for creative professionals to live, work, shop, and conduct business.[45] The project is spearheaded by area tenants, developers, city officials, and individuals from the nonprofit sector. Their aim is to attract interior, graphic, and web designers; ad agencies; and architects, photographers, art galleries, cafés, and other companies with a creative edge. The Delaware College of Art and Design has opened student housing in the district, and firms are relocating to the area to take advantage of a recently renovated business complex and mixed-use retail and commercial space.

Activities in **Michigan** have taken on a more technological flair. The Detroit Economic Growth Corporation (DEGC), in collaboration with the Detroit Investment Fund and its economic development partners, has developed the Creative Corridor Incentive Fund to bring creative businesses to Detroit's Creative Corridor. Also collaborating with the College for Creative Studies in Downtown Detroit, the Creative Corridor program holds the potential to bridge the gap between Detroit's creative industries and the city's high-tech, high-growth entrepreneurs.

With so much diversity from district to district, it can be a challenge to establish common denominators of effectiveness. **Iowa**, for example, is measuring the productivity of the communities it has designated "Great Places" on a cluster of factors, including population stability, employment, retail starts, per capita retail sales, and hotel tax revenue. Its assessment indicates gains in jobs, tourism activity, and especially retail activity. The assessment also found that the rapid increase in number of firms for all Great Places far outpaced the statewide average.[46]

Creating Spaces for Artists and Other Creative Talent to Cluster, Interact, and Thrive

As states are learning, when face-to-face interaction is a location priority, key connections and venues for interaction cannot be left to chance. States are redesigning spaces and establishing networks to link artists more strategically with one another and with creative businesses and property developers.

In particular, artist spaces, which include affordable units for living and working, retail space, and administrative and performance space, and which typically involve the adaptive reuse of older buildings, are being used to attract and retain artists, designers, and other creative entrepreneurs. Individuals in the spaces are connected to a larger community of artists, designers, and entrepreneurs who can often work together to boost their careers, reputations, and sales.

Regional economist Ann Markusen's 2010 study of how three **Minnesota** artist spaces benefit in-house artists and arts organizations, their neighborhoods, and regions found that the Northern Warehouse Artists' Cooperative, Tilsner Artist Cooperative, and Traffic Zone Center for Visual Art foster "synergies between artists by facilitating networking, collaborations, and their sharing equipment, knowledge, and skills." Artists reported boosts to their professional reputations and identities as artists, leading Markusen to conclude that the spaces help artists increase productivity and the amount of time they devote to art making. The artists' abilities to transform these career enhancements into income gains varied.[47]

Markusen also found that dedicated spaces for artists to work and convene "help to maximize artistic spillovers" within a local community. Artist centers enable residents to interact with artists and participate in the creative process; they contribute to the social, cultural, and commercial lives of local neighborhoods and "pay economic dividends for the region." By analyzing historical trends in socioeconomic data, estimating property value impacts, and interviewing residents, business owners, and government officials, Markusen showed that two of the artists' spaces increased surrounding property values. (Because of data limitations Markusen could not perform this analysis for the third case study.)[48]

Ventura, **California**, recently expanded its "California's New Art City" program by adding a new artist housing and gallery building known as "Working Artists Ventura," or WAV. In recent years, Ventura has emerged as a regional arts destination, with dozens of galleries in the downtown and the traditionally low-income Westside. Straddling those two neighborhoods, WAV includes affordable artists' lofts, as well as retail space, a flexible gallery and performance space, and market-rate condominiums. The project is located just a short distance from Ventura's high-tech incubator and provides for interaction between artists and web-based entrepreneurs. Already, downtown has attracted other design industry professionals, including architects and industrial product designers, drawn partly by the interaction between WAV artists and high-tech entrepreneurs. Key to project financing was the state's allocation of federal low-income housing tax credits.

On behalf of Eastport, Maine Senate President Kevin Raye (left) accepts $50,000 in community revitalization funding from the Maine Arts Commission (MAC). Also pictured are MAC Arts Policy and Program Director Donna McNeil and commission member Hugh French, director of Eastport's Tides Institute and Museum of Art.

Photo courtesy of Creative Edge and the Maine Arts Commission.

Tax credits or other incentives are only one option for states wishing to facilitate the development of creative spaces. States can also act as information providers, facilitate links between the public and private sectors, and propagate best practices in the development of creative spaces. An example is ArtistLink, led by the **Massachusetts** Cultural Council. ArtistLink is a statewide initiative that connects artists to affordable space and developers to opportunities to create spaces for artists. It provides targeted information and technical assistance to individual artists, arts organizations, real estate developers, and municipalities. ArtistLink works primarily in the predevelopment phase. Its technical assistance resources include feasibility assessments of access to the art marketplace; connection to legal, insurance, and building code services; and assistance with real estate searches.[49]

Establishing Innovation Hubs that Encourage Collaboration

Just as states have created spaces for individual artists to live and work, they have created spaces within cities and towns for a wide variety of creative individuals and enterprises—artists, website designers, architects, writers, university professors, product engineers—to be close enough to visit one another "before the cup of coffee gets cold." Increasingly, states are helping to create hubs and zones that encourage this kind of proximity, not just within economic sectors but across a diverse range of industries in which creativity matters, such as technology, entertainment, journalism, finance, and high-end manufacturing. The most successful of those initiatives are incorporating the arts and creative enterprises, not only as part of the industry mix but also as partners in the planning and development of the innovation zones. Inclusion of the arts and culture in all dimensions of hub development helps to create a fertile habitat for innovation and, ultimately, economic renewal and long-term prosperity, even in states that are facing some of the most acute economic challenges.

In **Arizona**, state and local officials are working on a number of such new developments, specifically to provide settings fostering innovation. In Phoenix, the downtown is being transformed into a hub for creativity and innovation. Significant developments include creating a new science museum and a performing arts facility and providing land for the state's investment to create the Center for Translational Genomics. Arizona State University (ASU) has been recruited to establish a 15,000-student campus there to strengthen downtown as both an urban design center and an innovation center. ASU's new Phoenix Urban Research Laboratory and an array of public policy and media programs are located close to the Translational Genomics Research Institute (TGen), along with the new Arizona Biomedical Collaborative and new University of Arizona medical school.

The strategic vision and blueprint for Phoenix's approach was developed in 2004 through the combined efforts of elected officials, city staff, business leaders, Downtown Voices (a coalition of arts and cultural enterprises and neighborhood associations), and more than 700 Phoenix residents. The blueprint establishes seven priority themes to shape the downtown's future as an innovation hub. The themes and policy recommendations emphasize the strengthening of downtown Phoenix's arts, culture, and entertainment hub, adding new "knowledge anchors"—education, research, and innovation assets—and using urban design to ensure connectivity (active street frontage, a "grand civic space," and shaded places or oases for people to gather and walk). Diversity, both physical and cultural, is also emphasized, including old and new buildings, big and small venues, global and local businesses, sun and shade, oasis and street life. In 2006, Phoenix voters overwhelmingly passed a bond program to implement the downtown plan.

Scottsdale is another city in the greater Phoenix region that is taking a proactive approach to designing an innovation hub. In 2004, the city struck a deal with ASU to build SkySong, the Arizona State University Innovation Center, in the southern part of the city on a 42-acre site that was once considered for the Phoenix Coyotes hockey arena. Like Phoenix, Scottsdale judged that it needed a new growth engine based on creativity and innovation rather than real estate and population growth alone. SkySong is being developed with the express purpose of clustering a distinctive collection of people, firms, and institutions—including ASU's intellectual property and

Seven Priority Themes Express Phoenix's Vision for Its Creative Downtown

1. ***Knowledge Anchors:*** The biosciences, education, and other large institutions, such as TGEN and Arizona State University, which will serve as downtown's anchors in the knowledge-based economy.
2. ***Downtown Living:*** The high-quality housing and community amenities required to live an everyday life oriented around downtown.
3. ***Great Neighborhoods:*** The great neighborhoods that can result from the city's neighborhood conservation, historic preservation, and mixed-use strategies.
4. ***Arts and Entertainment Hub:*** The arts, culture, and entertainment scene that will attract the "creative class" as well as visitors to downtown.
5. ***Distinctive Shopping:*** The wide variety of shopping and dining opportunities that will make downtown appealing for people who live there, people who live elsewhere in the region, and visitors as well.
6. ***Great Places/Great Spaces:*** The quality and uniqueness of historic buildings and public spaces provide identity, amenity, and opportunities for civic gatherings.
7. ***The Connected Oasis:*** The distinctive sense of place derived from using both pedestrian connectivity and shade as defining elements in downtown's design.

technology transfer efforts—with attention to interactions, networks, and culture, to put people with diverse perspectives and skills together both to create scientific advances or technological breakthroughs and to take them rapidly to market.

A big part of the SkySong strategy is physical design, including the iconic shade structure and the 120-foot-tall, tensile structure designed by Harry Cobb of Pei Cobb Freed and Partners, to bring people together and to ensure that ideas cross corridors and streets easily.

Collaborations and partnerships that go beyond a single physical space are also a priority. SkySong focuses on global connections through a vast number of international partnerships with organizations, universities, and other technology- and creativity-focused enterprises in Singapore, Turkey, Ireland, the United Kingdom, and Mexico. It wants to attract innovative companies to SkySong, as well as serve as a resource for U.S. companies aiming to expand abroad and explore new technologies.

Both Phoenix and Scottsdale are capitalizing on, and implementing, the three big bets that Arizona made during the last decade to provide a basis for the state's economic future. Those big bets are:

- **Arizona State University**—In 2000, citizens approved a tax increase and earmarked $1 billion over 20 years for the state's three universities to expand funding for university research, technology transfer, and new business development.
- **Genomics**—In 2002, $90 million was raised to jump-start the bioscience industry, and a road map was developed to scale up Arizona's efforts and activities in three areas of existing or emerging strengths: cancer therapeutics, neurological sciences, and bioengineering.
- **Industry clusters**—A strategy was developed to target technology-oriented, knowledge-intensive clusters, in order to build strengths in high technology, software, biomedical science, aerospace, and advanced business services—all sectors that compete on innovation, that can deliver high-income jobs, and that can propel other development.

The approach is paying off. Although Arizona has shed jobs faster than any state but Michigan during the recent recession, downtown Phoenix and SkySong attracted new companies, creating high-end jobs and generating economic impact. According to a 2011 study by the

In 2001, a major addition designed by Santiago Calatrava put the Milwaukee Art Museum on the map nationally as well as internationally. It spurred nearby projects along the waterfront, including a state park and two high-rises. *Photo courtesy of www.mam.org.*

Greater Phoenix Economic Council, companies that have located within SkySong—19 of them international—created 733 jobs as of 2011, more than 1,000 direct and indirect jobs overall, and generated $113.6 million in economic impact annually across the metropolitan area.[50] The study estimated that more than 5,000 jobs will have been generated by SkySong, with a total economic impact of $9.2 billion, when it reaches the 30-year mark of its development.

Phoenix's move to create a new hub of economic development, while revitalizing a previously neglected part of the city, may be the "state's most significant economic development success."[51] Today, downtown Phoenix is the business and government hub of the valley, with more than 80,000 jobs. It is the place to go for arts and culture; entertainment, sports, and dining; conventions; and education and research. It is one of the safest and most vibrant places in the metro region. On busy weekends, more than 100,000 people visit for events and activities. Thousands of new residents call downtown home. More than 30 new independent restaurants opened in 2011. More than 10,000 students, staff, and faculty add to the energy and excitement. And with numerous venues, including the Comerica Theatre, the Children's Museum, and First Friday Art Walks, to name a few, downtown is the arts and cultural center of the region.[52]

Washington is another state pursuing innovation hubs. The state passed legislation in 2007 to create state-designated Innovation Partnership Zones (IPZs) to encourage research institutions, workforce training organizations, and businesses to work cooperatively in small geographic areas. Regions that apply to be designated as an Innovation Partnership Zone must be able to

demonstrate the formation of a partnership that brings together academia, private industry, and workforce development; must identify a specific geographic area with an existing or emerging industry cluster; and must present a strategic plan for regional cluster development. There are currently 12 designated IPZs in the state of Washington, supported thus far by $6.5 million in state capital grant funding.[53]

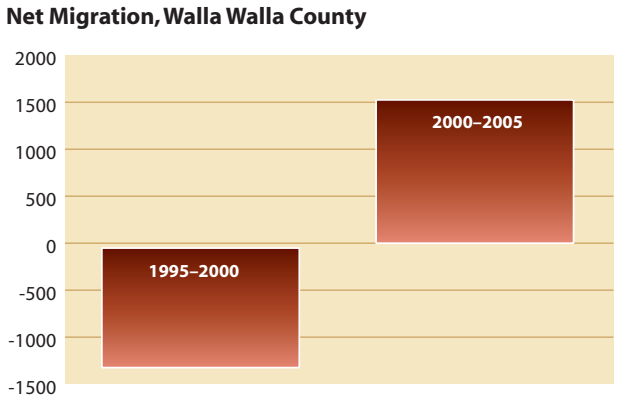
The Walla Walla region of **Washington** is boosting its rural economy through one of the state-designated Innovation Partnership Zones. Its IPZ strategy centers on improving the region's talent, infrastructure, and investment and entrepreneurship in two clusters. One is the emerging local wine industry and its related hospitality activities, which include the arts and culture.[54] The business plan for the wine-hospitality IPZ details an initiative to expand the performing arts in the region. Efforts to boost the wine-hospitality-arts cluster predate IPZ designation, and there is evidence that the region's combined vision for a cluster focused on arts, wine, and hospitality has boosted the economy.

As the cluster has grown, it has kept Walla Walla's economy from being stagnant. Nearly 16 percent of jobs in the region are dependent on the cluster, and the development of the cluster has not only stalled outmigration but boosted regional population growth. As shown in Figure 3, between 1995 and 2000, Walla Walla County lost nearly 1,000 residents to outmigration. But between 2000 and 2005, the county experienced a population increase of nearly 1,500.[55]

Arizona and Washington are not alone in pursuing innovation hubs as a strategy to foster long-term economic growth. A number of states are focusing on their universities and medical research institutions ("eds and meds") and the spaces around them as places with assets that can help companies spur innovation. **Pennsylvania** is encouraging communities with universities and research institutions to develop Keystone Innovation Zones where firms locate in close proximity to bring entrepreneurs and researchers together. **Ohio** is making similar investments, allocating some of its Third Frontier research money to build innovation hubs close to some of its universities.

Like Arizona and Washington, these states expect that innovation zones will be much more than land linked to a university. In addition to the infrastructure—roads, communication systems, subways—and mixed land use that support daily life and work, these innovation hubs are increasingly being designed physically and strategically to reinforce the cross-sector interactions, social organization, entrepreneurial spirit, and arts and cultural amenities of the state's creative economy.

FIGURE 3. Wine-Hospitality Cluster Helps Reverse Outmigration Trend



SOURCE: U.S. Census 2000 (Residence 5 years ago), U.S. Census Annual County Population Estimates

PROVIDING THE CRITICAL INGREDIENTS FOR INNOVATIVE PLACES: IN BRIEF

To boost economic growth, states are…

- Considering their universities and medical research institutions ("eds and meds") and the spaces around them as places that can be designed to offer the ingredients for innovation—smart people, research institutions, professional networks, favorable intellectual property agreements, and other conditions that can help companies spur innovation;
- Finding that cities, through their zoning and land use authority and their vibrant arts and cultural organizations, can catalyze or reinforce high-quality places as a competitive advantage for states in a global economy;
- Using tax credits and other kinds of incentives to encourage cities and developers to create cultural districts, creative corridors, innovation hubs, and other places that will attract a critical mass of creative talent and facilitate co-location, or geographic clustering, of complementary businesses; and
- Starting to measure the effectiveness and communicate the progress of these zones and districts by tracking change in population, employment, property tax base, and taxable sales.

Cloud Gate (nicknamed "the Bean") is a massive public artwork installation that anchors Chicago's Millennium Park, providing a locus for public gatherings and offering dramatic reflections of the Chicago skyline.

Photo courtesy of city of Chicago/Peter J. Schulz.

Catalyzing Community Revitalization

All over the country, states and cities are scrambling to find ways to reinvent and revitalize communities and neighborhoods. The arts, culture, and design sector can be a catalyst to revive older commercial districts and neighborhoods and can be part of a state strategy to reclaim abandoned investments in physical infrastructure and communities.

The stories of artist pioneers in neglected urban neighborhoods have been told over and over again. Not always told is the story of how the process of revitalization is part of an innovation strategy that is central to job creation.

Artists and other creative people bring coffee houses, nightclubs, and a positive urban street life. That scene in turn often attracts both individuals and companies on the leading edge of the creative or innovative economy that are looking for an interesting place to locate—one where dense networks can be readily established and where a vibrant arts, culture, and music scene provides a set of community amenities that can contribute to the development of innovative industries.[56] As technology sectors have shifted from engineering to design and creativity, such locations have become even more important to the high-tech economy.

Because creative people like to be around other creative people, even if they are in different businesses, Austin, **Texas**, is one of the great economic success stories in the United States in the last 30 years. There is no question that the region made great strategic moves and creatively exploited its assets, especially the University of Texas, in building new pillars of economic prosperity. But it is also true that Austin's flourishing music scene and its funky cultural attitudes—best summed up in the local slogan "Keep Austin Weird"—were key ingredients as well.

Using the Arts and Historic Preservation to Restore Distressed Communities and Reclaim Abandoned Spaces

Over the past 60 years, a tide of social, economic, and migration forces, including America's relentless suburbanization, has left thousands of older neighborhoods—downtowns, industrial districts, residential neighborhoods—in decline. Those neighborhoods represent an enormous investment in infrastructure and community that is being replicated in new suburbs but which can provide a foundation for urban recovery.

Efforts to encourage arts and design districts and historic preservation have proved effective catalysts in turning around distressed neighborhoods. Artists often are pioneers who lay the groundwork for the next stage of revitalization for distressed neighborhoods.[57] Once a neighborhood is reestablished as viable and its potential becomes clear, other innovative industries—often looking for cool space in cool neighborhoods—become interested in locating there.

Efforts to encourage arts and design districts and historic preservation have proved effective catalysts in turning around distressed neighborhoods.

Taking heed of this trend, in April 2011 the Ford Foundation started a $100 million program to develop artists' spaces across the country. In announcing the program, Luis Ubinas, the foundation president, cited the economic potential of artist communities in the foundation's decision to commit such a large sum:

> "We…believe that this investment in arts infrastructure will advance the well-being of communities because artists and art spaces can play a significant role in boosting local economies."

States and cities are propelling this new economic vitality as well as using historic preservation and artist relocation programs, for example, in catalytic roles.

More than half of the states offer tax incentives or credits for the rehabilitation of historic properties and homes in distressed neighborhoods. Generally those programs provide credit against state income, corporate, and other taxes to foster preservation investment. Combined with similar federal incentives, the state programs encourage private sector rehabilitation. They are a common and cost-effective community revitalization strategy that can foster jobs, stimulate business activity, preserve the cultural character of communities, and create moderate and low-income housing in historic buildings.

For example, **Michigan** increased its historic preservation tax incentives to encourage private rehabilitation of historic buildings.[58] The state has a number of tax credits and provides an online, searchable application that presents state resources, including grants, loans, tax credits, and services. That online Resource Toolbox promotes investment in neighborhoods and communities that have, or have potential to create, a mix of residential, cultural, and commercial uses, mixed-income housing, and a pedestrian-friendly environment. The Resource Toolbox has been as important for downtown and near-downtown areas as it has been for residential neighborhoods close to traditional centers of commerce. The tax incentives and credits are major resources for the state's well-known Cool Cities Initiative, which is concerned with helping cities and people throughout Michigan revitalize their neighborhoods and communities by attracting talent, spurring innovation, fostering diversity, and creating an environment that meets people's needs.

The High Line is a park on an old elevated railway on the West Side of Manhattan, which draws New Yorkers as well as tourists. In the daylight the space functions like a central plaza, with trees scattered around benches, open areas and amphitheater-style seating.

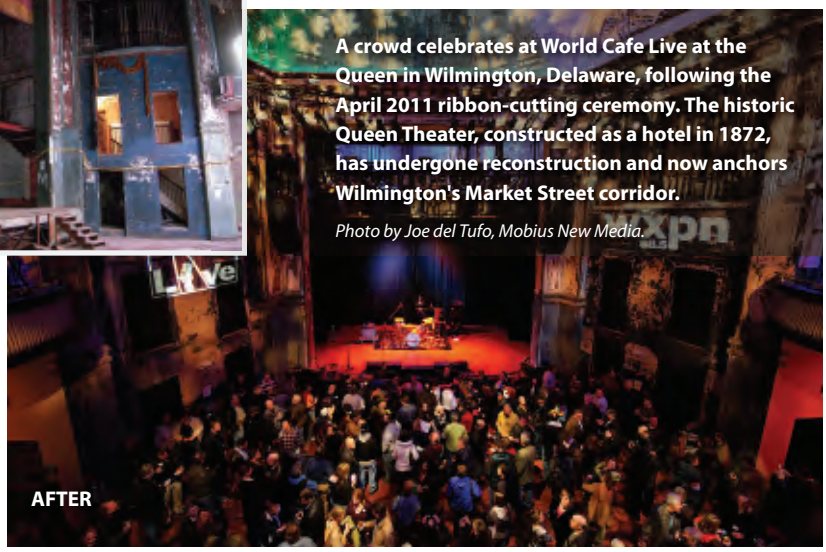
Photo courtesy of Stuart Rosenfeld.

The aesthetic and quality-of-life benefits of preservation are generally acknowledged.[59] However, doubts are often expressed about whether preservation provides a quantifiable economic contribution. Various studies across the nation, including some by Rutgers University's Center for Urban Policy, have shown that historic preservation provides urban neighborhoods and rural towns with clear economic benefits, measured in property values and tourism dollars. A 2007 study by Michael L. Lahr and David Listokin of Rutgers documented the economic impact of historic preservation in **Nebraska**, concluding that for the average $46 million spent per year between 2001 and 2005 on statewide historic rehabilitation, benefits to the state included 746 jobs, $23 million in income, and $30 million in gross state product (GSP). The results for neighborhoods in Lincoln, Omaha, and Red Cloud designated as "historic" also provide some support for the notion that property values are higher and grow faster in such designated neighborhoods.[60]

Artist relocation programs have also proved successful in leveraging the economic potential of artists and art space in rehabilitating and developing uninhabitable areas of a city and in attracting tourists, businesses, and new residents.

The Paducah, **Kentucky**, Artist Relocation Program was started in August 2000 as a way to reduce urban blight, preserve historic buildings, and bring artists in particular to the downtown area of LowerTown, the city's oldest neighborhood. Incentives offered to artists and others include 100-percent financing for the purchase and rehabilitation of an existing structure or the building of a new structure; free lots for new construction, as available; assistance in paying professional fees; and national marketing exposure as a part of the LowerTown Arts District. In the first year, eight artists moved to LowerTown. In the second year, the number increased to around 20. In 2010, more than 100 artists lived and worked in the neighborhood. And they have shown a willingness to invest in their adopted community, according to the program. While the city spent about $3

million on the project in its first five years, the artists themselves invested $35 million in the neighborhood's buildings.[63] A study conducted by Americans for the Arts in 2009 found that Paducah's arts scene brought in $27.8 million in 2007.[64]



A crowd celebrates at World Cafe Live at the Queen in Wilmington, Delaware, following the April 2011 ribbon-cutting ceremony. The historic Queen Theater, constructed as a hotel in 1872, has undergone reconstruction and now anchors Wilmington's Market Street corridor.

Photo by Joe del Tufo, Mobius New Media.

To facilitate the development of such programs statewide, the Kentucky Arts Council launched a new cultural districts certification program. Announced by Governor Steve Beshear in 2011, this program recognizes and provides technical assistance to local districts that use the arts to promote civic and economic revitalization. The program blends a variety of elements important to Kentucky communities, such as their cultural assets, their historic resources, a strong agricultural heritage, and "pride in place." Certification criteria have been established to set a statewide standard for cultural district development. Training and technical assistance help approved districts advance their plans, market their districts, develop funds, and incorporate arts education components into their activities. Technical assistance teams will work with each district to develop specific benchmarks for measuring success.[65]

Similar efforts are under way in Toledo, **Ohio**, historically a major industrial hub. The slump in American manufacturing brought hard times to the city, which has struggled with population flight, limited business opportunities, demolished properties, and high rates of unemployment. Live Work Create Toledo is an initiative that is using the talents and energy of artists to revitalize downtown Toledo and its surrounding neighborhoods. The program attracts creative activity to Toledo, while establishing the city as a Midwest arts hub and a model city for Rust Belt revitalization. With support from the Ohio Arts Council, the program facilitates the development of incentives that draw creative talent to the city and spur renovation of neglected or underused properties.

The initiative has resulted in the creation of an arts zone in the city's core and the collective promotion of more than 40 artists who have established studios in the area. The initiative has also established relationships with private developers who are putting vacant buildings to new use. Such arts-based economic impact is not limited to Lucas County but has a positive effect on the entire region. A study conducted by Bowling Green State University's Center for Regional Development concluded that the region's creative industries generate an annual $2.4 billion in Northwest Ohio and support 33,000 jobs.[66]

In **Arizona**, the Curley School project anchors an arts-based revitalization strategy for the devastated copper mining town of Ajo 140 miles west of Tucson and 40 miles north of the Mexican border. A wide variety of state and federal funding sources—housing, historic preservation, state parks—were tapped to rehabilitate historic buildings into 30 affordable live-and-work rental units for artists, plus an auditorium with an indoor-outdoor stage. Local artisans who purchased vacant homes originally built for workers employed by the Phelps-Dodge copper mining company contributed significantly to the revitalization, as did the presence of the beautiful, 1920s-era Curley School, a cluster of buildings in the Spanish Colonial revival style.

Beginning in 2002 with a modest $5,000 grant from the National Trust for Historic Preservation, the International Sonoran Desert Alliance (ISDA) worked with ArtSpace to engage the Ajo community in a planning effort for the conversion. Ten percent of the town's population participated. Many residents are painters with a close connection to the Arizona desert. The ISDA project also renovated adjacent buildings to create a retail gallery, a business incubator, shared work space, a computer lab, classrooms, meeting rooms, and offices. As a result, Ajo has become a regional center for cultural tourism, greatly expanding the artisans' potential market, and artists have access to business planning assistance programs as well as new access to capital though matched savings accounts and microloans.[67]

Improving Livability and Quality of Life through Creative Public Spaces

In 1993, numerous abandoned row houses in Houston were slated for demolition. Led by a team of artists and community volunteers, Project Row Houses has transformed the area, which now offers art galleries, arts education programs, affordable housing and social service programs.

Photo courtesy of Ashley Clemmer Hoffman, Public Art Manager.

The question of how to foster high-quality places is one of the most important in economic development today. By providing amenities, connectivity, and sense of place, public art and well-designed public spaces can be part of the answer. They contribute to the visual landscape and character of a state or city. They help transform transportation corridors and waterfronts into welcoming places for people to live, work, play, and gather as a community.

Twenty-seven states (and more than 90 municipalities) now have public art or percentage-for-art policies in place.[68] Washington and Vermont epitomize these state programs and their contribution both to the quality of life and to employment opportunities in a state or region.

The state of **Washington** stipulates that one-half of 1 percent of the construction costs of new public facilities be used for the incorporation of art into the site. Managed by the Washington State Arts Commission, the state's Art in Public Places program enhances schools, parks and green spaces, government buildings, and public corridors—60 to 70 sites per year. On average, nearly 30 percent of the funding goes to subcontractors: graphic designers, paint shops, fabrication and welding companies, CAD outfits, photographers, haulers, concrete contractors, structural engineers, and others.[69] Washington's public art law, enacted in 1974, is the second oldest in the nation and is one of only four to include the K–12 public school system.

In **Vermont**, artists, community members, and engineers are working to integrate artistic enhancements into the redevelopment of a portion of U.S. Highway Route 2 through the village of Danville in a way that combines state and local efforts. The Danville Transportation Enhancement Project brings together the Vermont Arts Council and the Vermont Agency of Transportation in a first-time partnership to work with the town. Much of Route 2 throughout Vermont has already been widened and better designed, but the Danville section of the highway remains to be completed. Route 2 is essentially the community's main street, as it runs through the town center connecting the school, general store, and several churches. The goal of the project is to upgrade road conditions through the town to meet Federal Highway System requirements, while enhancing the feel of a small, close-knit, rural community and preserving a pedestrian environment. With broad public, private, and multiagency support, the Danville project provides a template to help small communities deal with quality-of-life issues as they relate to the demands of infrastructure.

CATALYZING COMMUNITY REVITALIZATION: IN BRIEF

To boost economic growth, states are…

- Supporting the use of arts and design—combined with historic preservation efforts—to turn around distressed neighborhoods;
- Using tax incentives and grants to encourage private rehabilitation of historic buildings and the creation of arts districts where creative people and enterprises are encouraged to live, work, and collaborate; and
- Using public art programs to activate public locations in a way that engages all people in the creative process.

New Engines of Growth

Five Roles for Arts, Culture and Design

SOLUTIONS
american
GLOBALIZATION
Challenges
innovation
innovation
CREATE
revitalization
creativity
skills
business
competitiveness
job creation
Design
states
PRESERVATION
Research
Networking
internet
packaging
CULTURE
ARTS
manufacturing
economy
SOCIAL
architecture
Healthcare
technology
science
cities
education
industries

Following World War I, the U.S. Navy manufactured torpedo shell casings and other weapons at the Torpedo Factory in Alexandria, Virginia. Today, the Torpedo Factory Art Center houses 160 professional artists, who create and sell their work on site, as well as 1,000 cooperative-gallery members and about 2,000 art students.

Photo courtesy of the Torpedo Factory Art Center.

Delivering a Better-Prepared Workforce

The art and design disciplines teach many of the skills that support innovation and high productivity and thus support high-wage jobs. Those skills include everything from understanding the creative process, to collaborating on innovative breakthroughs, to knowing when and how to fix a problem on an assembly line. Economic development, education, and arts and culture agencies are natural partners in workforce development. Areas in which such partnerships can provide benefits include:

- Setting formal requirements for arts and creativity in K–12 education standards;
- Integrating arts into K–12 cross-curricular learning;
- Engaging at-risk youth in art and sustainability activities; and
- Including the arts and design in adult education and workforce training.

Incorporating Arts and Creativity in K–12 Education Standards

Recognizing the value of art and design in the development of workforce skills, most states have integrated formal requirements for arts and creativity into K–12 education. Forty-eight states have enacted overall arts curriculum standards, 47 articulate specific arts instructional requirements, and 40 require arts units for high school graduation.[70] Some states, including **Colorado, Louisiana, North Carolina,** and **Ohio**, have recently updated and strengthened these policies.

The **North Carolina** 2010 general assembly authorized a state board of education task force to create a Comprehensive Arts Education Development Plan for the public schools. In **Ohio**, the department of education established the Committee for the Arts and Innovative Thinking, a statewide arts advisory committee, to promote and advance the arts in the lives of all Ohio students. The initial focus of its work has been promoting collaboration in curriculum design among arts and so-called STEM teachers (those in science, technology, engineering, and math)—significant recognition that the arts are as important as science and math in the 21st-century workforce.[71]

In 2012 **Colorado** passed legislation that "strongly encourages" all Colorado public schools to provide education in the visual and performing arts and directs the state board of education to recognize the importance of the arts in future graduation guidelines. In **Louisiana,** the Arts in Education Legislation Act was enacted to put music and the arts in every Louisiana public school by the 2010–2011 school year.

Actual implementation of arts learning, however, remains a challenge. Some states have moved to try to bridge the gap between setting statewide requirements and actual implementation in schools. At least 15 states have produced studies to assess

Recognizing the value of art and design in the development of workforce skills, most states have integrated formal requirements for arts and creativity into K–12 education.

Rose Hill Elementary students explore physical movement with teaching artist Shannon Barnes through the Discover Dance Consortium, funded in part by the Washington State Arts Commission.

Photo by Bill Mohn, courtesy of Washington State Arts Commission.

the status, condition, or effects of arts instruction on a statewide basis.[72] For example, the **New Jersey** Arts Education Census Project, a partnership of the New Jersey State Council on the Arts, the New Jersey Department of Education, the Geraldine R. Dodge Foundation, the New Jersey Arts Education Partnership, ArtPride New Jersey, and Quadrant Arts Education Research, is a comprehensive effort to complete a statewide, mandatory, school-by-school survey for the visual and performing arts. The survey is being conducted by the New Jersey Department of Education. One of the goals of the project is to measure the gap between state curriculum requirements and implementation. The state has core curriculum content standards in the visual and performing arts. Students are expected to achieve basic literacy in four arts disciplines (dance, music, theater, and visual art) by grade 6 and to communicate proficiently in one of them by high school graduation.

The project's 2007 report found that although 81 percent of schools had updated their curricula to reflect the standards for visual and performing arts, 19 percent had not. And although 94 percent of New Jersey students had access to some arts education in their schools, the majority of public schools did not offer instruction in all four art disciplines.[73]

A similar report in **Washington** found that 33 percent of elementary students are getting an average of less than one hour of arts instruction per week, and 47 percent of schools offer instruction in only one of the four primary arts disciplines. Further, 63 percent of principals are dissatisfied with the quantity of arts education in their schools.[74]

Integrating Arts into K–12 Cross-Curricular Learning

Another way to integrate arts skills into well-rounded workforce education is to include art in other K–12 curricula, teaching the arts in conjunction with language, history, and science, with the result that learning in both the arts and non-arts subjects is reinforced and enhanced.

Value Plus Schools is a whole-school reform model, led by the **Tennessee** Arts Commission (TAC), that emphasizes cross-curricular learning. Critical thinking skills, cooperative learning, and technological fluency are also core components of the program in addition to other subjects such as math and science. Students in Value Plus schools—generally from lower socioeconomic backgrounds—made gains of 8 percent in achievement test scores over four years, compared to a 1 percent increase in the control schools. In one Value Plus School where special education teachers reported integrating the arts in math instruction three or more times per week, student proficiency in math increased by 23 percent.[75] The Value Plus program has been awarded two Arts Education Model Development and Dissemination Grants by the U.S. Department of Education—an unprecedented achievement—and also receives funding from the Tennessee General Assembly. Building on the success of Value Plus Schools and the lessons learned, the TAC has initiated an Arts 360 program that emphasizes arts integration in schools. The commission was awarded a four-year grant to develop the program and is currently piloting it in five schools.[76]

The A+ Schools program in **North Carolina**, another whole-school reform model, fosters creativity-based learning. It has a long record of producing results. Initiated by the Keenan Institute, the program is managed for the state by the North Carolina Arts Council, a division of the Department of Cultural Resources. The A+ Schools model has received national recognition for its results, which include student achievement gains and improvements in the school environment, and has been replicated in Oklahoma and Arkansas.[77]

In **Oklahoma**, A+ Schools commit to a set of eight essentials, including arts, experiential learning, and collaboration, among others. The professional development

needed to integrate these essentials is provided by OK A+ Fellows, a group of teachers and teaching and practicing artists. The schools develop a curriculum that crosses traditional disciplinary boundaries, teaches art daily, and integrates arts into the teaching of other subjects.[78] Students might learn about math or science concepts through music. Such cross-curricular connections are made through a curriculum mapping process that all teachers participate in.[79]

Utah's Beverley Taylor Sorenson (BTS) Arts Education Initiative, funded by the state and cooperatively run by the office of education and the Utah Arts Council, provides full-time-equivalent arts specialists in 57 elementary schools but uses a side-by-side teaching model. Each school hires a specialist to teach dance, drama, music, or the visual arts and pairs those teachers with regular classroom teachers for cooperative and integrated art lessons.

Spurred by growing concerns about workforce preparedness and competitiveness, numerous states have developed formal programs or policies designed to increase student achievement in specific skills needed to advance innovation, invent new products, and apply rigorous problem-solving methods.[80] Such STEM initiatives originally emphasized education in only four discipline areas: science, technology, engineering, and math (STEM). More recently, however, both education and business leaders are emphasizing the importance of adding the arts and design into that mix.[81]

As mentioned earlier in this report, in 2007, the **Ohio** Department of Education created a statewide Committee for the Arts and Innovative Thinking to advance arts in the education of all Ohio students. The initial focus of its work has been promoting collaboration in curriculum design among arts and STEM teachers. When the state's 2007 budget included more than $200 million for STEM-related education initiatives, focused on creating STEM schools and K–8 "programs of excellence," the STEM schools funding required that the schools include a role for the arts and humanities.[82]

The Oklahoma Arts Council's Arts in Alternative Education Program (ALTED) teams resident artists with classroom teachers in alternative education settings across the state.

Photo by Kristi Lovett, courtesy of the Oklahoma Arts Council.

Engaging At-Risk Youth in Art and Sustainability Activities

High-quality arts programs can move youth away from dangerous or criminal activities and toward better education and better jobs. Although many of the available examples are located in large cities, the value of arts to developing young people is equally significant in smaller communities.

In **Illinois**, Gallery 37, operated by the Chicago Department of Cultural Affairs, has transformed a formerly vacant, three-acre lot adjacent to Grant Park (known as "Block 37") into a lively cultural hub that employs youth to study and create art. In addition to paid apprenticeships that teach youth how to create and market artworks, this outdoor gallery offers art classes and workshops free to the public. Since its inception, the program has grown to include satellite programs in nearly 30 Chicago neighborhoods. After-school adaptations of the original summer plan have spread to more than 30 Chicago public high schools. Seventy-five percent of the young participants are from economically disadvantaged families, and 70 percent attend Chicago public schools. Eighty percent are from African American, Latino, Native American, or Asian/Pacific Islander communities. Youth participation in Gallery 37 leads to a heightened sense of cultural identity, enhanced self-esteem, and new understanding of how to turn artistic and social skills into future employment opportunities.

The **Oklahoma** Arts Council's Arts in Alternative Education Program (ALTED) provides funds to assist hands-on instruction and participation in the arts through alternative education programs in the public schools. Offered through a partnership of the Oklahoma Arts Council and the state department of education, the program was set up by state legislation designed to improve outcomes for students. It teams resident artists with classroom teachers to assist students whose needs are not met by traditional education. Evaluations have found that the ALTED program—which involves a wide variety of visual, performing, and literary arts—has had pos-

Students in Southeast Kentucky Community and Technical College prepare mosaics with ceramic tile to relate the history of coal miners in Harlan County. *Photo courtesy of Robert Gipe.*

itive effects on students' creative problem-solving skills, decision making, goal orientation, teamwork skills, attendance, grades, and family relationships.[83]

The **Mississippi** Arts Commission's Core Arts Initiative supports programs that are developed with—and within—an often overlooked segment of communities: the juvenile justice system. It was developed to help the state legislature address concerns about increased rates of juvenile crime. The state has established arts programs at a number of facilities, from detention centers to alternative schools and holding facilities. Each program uses the arts as a tool to decrease violence and recidivism, as well as to increase school attendance and provide positive experiences with adult mentors. Over time the Core Arts Initiative has led to improved behavior and academic performance by participants, reduction of violent incidents, and improvements in the overall climate and operating culture of the participating facilities.[84]

In **Massachusetts**, Artists for Humanity (AFH) is a Boston organization that has achieved national recognition for building a creative workforce, fostering arts and business collaborations, and embodying the principles of environmentally sustainable design and business practices. Funded and aided by the Massachusetts Cultural Council and other public and private partners, AFH's central program is the Arts Micro-Enterprise, a paid apprenticeship program for inner-city teens. AFH links youth in small groups with professional artists and designers to design, create, market, and sell art products. AFH trainees have created products for many of Boston's largest corporations and—despite the challenging economy—earned over $800,000 in sales in 2009.

These programs use the arts as an intervention strategy that can help save communities hardship, provide families with support, and prevent incarceration, while building skills for a contemporary workforce.

Including the Arts and Design in Adult Education and Workforce Training

Both education and business leaders are increasingly emphasizing the importance of adding the arts and design to the workforce preparation mix.[85] According to a recent report by the National Center on Education and the Economy, American economic leadership "does not depend on technology alone. It depends on a deep a vein of creativity that is constantly renewing itself."[86] Fixing the pipeline for future workers is a policy priority for states. Helping adult workers and improve their problem solving and critical thinking, as well as the other creative skills required for knowledge-intensive jobs in the United States today, is also on state policy agendas.

In **Idaho**, Boise State University's (BSU) College of Business and Economics has established a Center for Creativity and Innovation dedicated to cultivating a creative workforce and fostering a business climate conducive to innovation. In addition to convening annual "Create! Idaho" forums, the center develops curricula and courses for BSU and serves as a hub for sharing news and resources concerning creative workforce and business development in the Treasure Valley region.[87]

The STUDIO for Creative Inquiry is an interdisciplinary center at Carnegie Mellon University in Pittsburgh, **Pennsylvania**, that connects arts to university research in a range of subjects and to grassroots community efforts.[88] The STUDIO's mission is to support creation and exploration in the arts, especially projects that bring together the arts, sciences, technology, and the humanities and that affect local and global communities. The STUDIO provides fellowships to artists, who generate specific projects that often incorporate disciplines from cell biology, to robotics, to imaging technology. For example, the Mobile Art and Code project produced a conference and workshop series to teach mobile phone programming to kids and artists. The Nine Mile Run Greenway was a three-year project that engaged artists, scientists, engineers, and planners in transforming an industrial waste site into a sustainable environment of

public green space. The Tissue Engineering for Life project produced a planetarium show focused on tissue engineering and its applications, with the goal of delivering scientific content through an interactive, multimedia show. The project led to the development of a range of curriculum materials for use in K–12 classrooms and an outreach program that targets youth in underrepresented and underserved rural and inner-city communities. The state has supported the program through Pennsylvania Council on the Arts grants.

In **North Carolina**, Guilford Technical Community College started the Larry Gatlin Entertainment Technology Center. It offers one- and two-year degree programs and continuing education directed toward a range of employment and freelance opportunities in all technical aspects of the entertainment industry. In addition, North Carolina State University's Institute for Emerging Issues has adopted the "Creativity, Inc." initiative which works with the state's business and policy communities to develop the workforce and establish incentives for creative businesses across North Carolina.[89]

Students look over film negatives during photography class at Parkview Arts and Science Magnet High School in Little Rock, Arkansas. *Photo courtesy of www.lrsd.org.*

Maine has a strong craft tradition, and Eastern Maine Community College (EMCC) and the Maine Crafts Association recently formed a partnership to develop educational programs to support trademark crafts, including training for working artists. One result is the college's Traditional and Contemporary Craft degree program, started in fall 2009. To fulfill the requirements for the degree of Associate in Applied Science for Traditional and Contemporary Crafts, students must successfully complete a combination of two basic design classes, in addition to a history of craft class, general education classes, 24 credit hours of prior learning experience and apprenticeship hands-on training, and custom-tailored internships in the student's specialization.[90] Entrepreneurial skills are taught through three required business management classes, including a course on business plan development. Graduates will be proficient in their specialized media and will be able to demonstrate skills in product design, marketing, and accounting. A Certificate of Traditional and Contemporary Crafts is also offered at EMCC and requires 12 credit hours. EMCC provides most of the funding for the program, supplemented by two private foundation grants.

DELIVERING A BETTER-PREPARED WORKFORCE: IN BRIEF

To boost economic growth, states are…

- Maintaining the inclusion of arts in state curriculum requirements;
- Integrating arts and design into technical and business programs in community colleges and universities;
- Mapping career paths in creative enterprises and occupations; and
- Creating centers of excellence in higher education to recruit recognized faculty who can attract talented students and link the arts to technology to inspire innovation.

New Engines of Growth

Five Roles for Arts, Culture and Design

SOLUTIONS
american
GLOBALIZATION
Challenges
innovation
innovation
CREATE
revitalization
creativity
skills
business
competitiveness
job creation
Design
states
PRESERVATION
Research
Networking
internet
packaging
CULTURE
ARTS
manufacturing
economy
SOCIAL
architecture
Healthcare
technology
science
cities
education
industries

Conclusion

This report focuses on the ways that arts, culture, and design can assist states as they seek to create jobs and boost their economies in the short run and transition to an innovation-based economy in the long run. In particular, arts, culture, and design can produce economic growth because they can:

- Provide a fast-growth, dynamic industry cluster;
- Help mature industries become more competitive;
- Provide the critical ingredients for innovative places;
- Catalyze community revitalization; and
- Deliver a better-prepared workforce.

Using the five roles as a framework, state leaders—governors, economic development officials, and state arts agencies—can make arts, culture, and design an important part of an overall economic growth agenda. States have already undertaken initiatives that are highly relevant to that agenda. Grouped by the five roles some of the most promising efforts include the following:

Providing a fast-growth, dynamic industry cluster.

The creative economy does not consist only of artists. It includes a broad cluster of creative activities—arts, culture, design, entertainment, publishing, fashion, and other components. Existing economic development strategies can be used to focus on creative clusters within a state for competitive advantage. State leaders can:

- Identify creative enterprises—both commercial and nonprofit—in analyses of state industry clusters;
- Include creative enterprises and arts, design, and cultural development experts in economic task forces, meetings, and other leadership activities;
- Examine eligibility criteria for state assistance (incentives, training, technical assistance) to make sure that creative enterprises, artists, arts, and cultural organizations are eligible to participate;
- Integrate entrepreneurial curriculum modules into art and design programs and into other education programs in community colleges and four-year institutions; and
- Pilot small business development center training courses for artists and entrepreneurs in creative fields.

Using the five roles as a framework, state leaders—governors, economic development officials, and state arts agencies—can make arts, culture, and design an important part of an overall economic growth agenda.

Helping mature industries become more competitive.

Not only is the creative cluster a productive economic sector itself, but it also contributes significantly to the productivity of other industries and sectors. State leaders can foster links between the arts, culture, and design assets in their states and industries, such as manufacturing and tourism, that are struggling to rethink their products and markets. They can:

- Position arts, culture, and design alongside R&D as a source of innovation economywide;
- Create units and expertise within community colleges, manufacturing extension centers, and agricultural extension services dedicated to design—for example, providing access to technical assistance in the design of products, packaging, and branding; and
- Create pilot programs (perhaps with foundations) that place artists and designers in a position to work with and for companies as contracted talent, interns, or artists in residence.

Providing critical ingredients for innovative places.

Innovation hubs are much more than land linked to a university. They combine all sorts of enablers of innovation: from their mixed land use to support cross-sector interactions and the arts and cultural amenities of the creative economy to the social organizations and networks to connect researchers and entrepreneurs. States can foster key enablers of innovation with strategies to:

- Encourage (via tax credits and other kinds of incentives) cities and developers to create cultural districts, creative corridors, innovation hubs, and other places that will attract a critical mass of creative talent and facilitate co-location or geographic clustering of complementary businesses; and
- Consider universities and medical research institutions ("eds and meds") and the spaces around them as places that can be designed physically and strategically to offer critical ingredients for innovation—smart people, research institutions, professional networks, favorable intellectual property agreements, and so on, that can help companies spur innovation.

Catalyzing community revitalization.

Creative industries—and arts and culture in particular—play two important roles in communities. First, artists and cultural activities can create important anchors in neighborhoods and districts, often helping to revive them. Second, the presence of such activities will draw other participants in the innovation economy, such as researchers or software developers, who want to be in a creative ecosystem. Ways to support these roles include:

- Use the arts and cultural districts and historic preservation programs to encourage developers and communities to reclaim abandoned spaces and encourage co-location of creative and innovative businesses close to one another; and
- Use creative public spaces to improve livability and quality of life.

Delivering a better-prepared workforce.

An orientation toward arts, design, and creativity fosters the kinds of skills required in America's 21st-century economy, whatever the business or economic sector. Governors can encourage workforce development efforts to begin focusing on arts and creativity—not because workers will become artists, although some will, but because creative skills are increasingly required for good jobs, business success, and economic prosperity. Governors and other state leaders can:

- Ensure that arts continue to be included in state education requirements, and encourage localities to adhere to those requirements;
- Support arts integration policies and practices that link the arts with non-arts subjects, including STEM initiatives;
- Include the arts and design in adult technical education and workforce training programs; and
- Create centers of excellence in higher education, to recruit recognized faculty who can attract talented students and link the arts to technology to inspire innovation.

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NGA Center for Best Practices
444 N. Capitol Street, Suite 267
Washington, DC 20001
202.624.5300
www.nga.org/center