

Support Economic Innovation

Implementation Action Area #1: Improve Data and Information Systems

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Evaluate the success of state innovation programs and financial incentives	State (DCEO, and other relevant state agencies)	<p>The history and impacts of state programs and incentives for <u>economic development and innovation</u> should be evaluated. Such an evaluation can inform the <u>expansion or restoration of successful programs, identify gaps in existing programs, and improve responsiveness to emerging economic trends.</u> re-creation of certain programs, like ITEC and Innovation Challenge grants, which have experienced funding cuts in recent years. The State should also evaluate current programs, like IEN as well as the range of other financial incentives and services offered to entrepreneurs and businesses. There is good evidence that many of these state programs have been quite successful -- these successes need to be better <u>analyzed,</u> documented, and publicized to inform future state <u>legislation policies and programs.</u></p>	Retain <u>Revise</u>

Implementation Examples:

- CMAP is conducting research on the role of state and regional governments in planning for economic development opportunities. This includes best practices in economic development programs from around the country as well as how the region and state’s current incentive programs can respond to new global dynamics.
- The Illinois Science and Technology Coalition is investigating state innovation programs focused on the biotech and health sciences cluster.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Revisiting to broaden and encompass more economic development programs and incentives.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Collect <u>and analyze</u> data relative to innovative business starts and closures in the region	CMAP, WBC, InnovateNow , IDES, <u>ISTC</u>	Currently there is no solid <u>very limited</u> information about how innovations translate into larger economic effects, such as jobs and business starts. CMAP <u>and other regional entities</u> should measure the number of new innovation start-up firms and jobs created (a similar measurement was developed by San Diego's CONNECT program). <u>This is the best way to</u> <u>will provide the region with a means of tracking emerging industries and technologies</u> , the growth in new firms, as well as their longevity. This information should also have useful research consequences beyond the study of innovation.	<u>Retain</u> <u>Revise</u>

Implementation Examples:

- The [Illinois Innovation Index](#) measured start-ups as part of its assessment of the business climate. Data shows the number of startups by industry and how the Chicago region compares to our peer regions.
- Since 2011, Built in Chicago has been measuring the number of digital startups each quarter and compiles the totals in an annual report. The [quarterly and annual reports](#) also track the funding raised by startups, number of jobs at startups, and the number of acquisitions.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Revised slightly to update language and include other Lead Implementers.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Collect and analyze other pertinent data related to innovation outcomes	CMAP, WBC, InnovateNow , Chicagoland Chamber of Commerce , Illinois Science and Technology Coalition , CMRC, IDES, additional outside experts	CMAP and other regional partners can serve a vital role as a central repository for the collection of data related to innovation. CMAP should also consider how to best measure success through this data -- other groups have created weighted measures of a variety of variables -- an "innovation index" -- which can work to measure future success.	Retain Revise

Implementation Examples:

- In 2013 and 2014 CMAP has undertaken initial work to improve data and information systems related to human capital, a key recommendation of the plan. Going forward, CMAP will continue to provide more robust information related to human capital through its website. Staff will collect and analyze data related to economic trends, industry clusters, innovation, and workforce.
- From 2011 to 2013, CMAP collaborated with World Business Chicago, the Illinois Science and Technology Coalition, and the Chicagoland Chamber of Commerce to collect and analyze data on innovation through the Illinois Innovation Index. In its first year, the partners released a monthly newsletter examining a different innovation indicator, including exports, small business funding, patents, R&D funding, cluster trends, and several others. The group published an annual report compiling all the indicators in one document. In 2013, the group issued shorter monthly updates, and focused on more robust analysis in a quarterly newsletter. Each quarter focuses on a different theme: Capital, Dynamism, Business Climate, and Talent.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Revised slightly to include additional Lead Implementers.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Research and redesign technology transfer evaluation criteria	State (DCEO), Illinois Science and Technology Coalition , technology transfer programs at universities and other institutions	<u>The region needs to increase technology commercialization and bridge the gap between the region's basic research assets and the private market.</u> There is some evidence that innovators are changing their products to be responsive to the criteria by which technology transfer programs are judged. This is likely inefficient. Alternative metrics that better reward commercialization of new innovations should be explored. Applied research should be carried out by interviewing tech transfer officials, <u>scientists, engineers, investors, and manufacturers</u> , and researching other evaluation metrics.	Retain <u>Revise</u>

Implementation Examples:

- CMAP published the freight cluster drill-down in 2012 and the manufacturing cluster drill-down in 2013. Together these analyses call attention to commercialization challenges between basic research and marketable products, and provide steps to increase technology transfer through increased private-sector participation in key technology specializations.
- Together with its partners, CMAP tracks technology transfer metrics and news as part of the Illinois Innovation Index. This includes technology licenses and revenue, academic patent output, and university start-ups.
- In its economic development work CMAP has called attention to the region and state's underperformance in the federal SBIR/STTR technology transfer programs, highlighting the need to better engage the region's numerous small-sized firms in commercialization activities. The Illinois Science and Technology Coalition has also undertaken work to improve small firm's technology transfer competitiveness through SBIR and STTR.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Revised slightly for clarity.

Implementation Action Area #2: Nurture the Region's Industry Clusters

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
<p>Form coalitions around the region's vital industry clusters to organize regional strategies and <u>obtain public and/or private funding</u> <u>better position the region to compete in the global marketplace</u></p>	<p>State (DCEO), CMAP, local governments, nonprofits (Chicagoland Chamber, CMC, MEGA, World Business Chicago), Chicago Fed, workforce boards, philanthropic organizations</p>	<p>The region should use its various clusters of regional specialization as an overarching organizing framework for future coordination, collaboration, and proactive initiatives, including organizing around potential <u>state and federal funding</u>. <u>The region should implement strategies to support key clusters, such as the recommendations identified in CMAP's cluster drill-down reports to foster innovation, meet workforce needs, and prioritize infrastructure investments.</u> <u>opportunities such as the reauthorization of America COMPETES, which should include funding for a Regional Innovation Clusters Initiative.</u> <u>Specifically, Build</u> public/private coalitions to <u>can develop strategies to attract businesses and skilled workers; funding and involve research labs and universities as appropriate.</u> Illinois CleanTech, hosted by the Chicagoland Chamber, is a recent initiative that may be a model for such future activity. <u>and articulate a common regional direction.</u></p>	<p><u>Retain</u><u>Revise</u></p>

Implementation Examples:

- An interstate coalition of universities, private firms, educators, public agencies, and civic organizations was established to garner federal support to expand the mega-region's innovation assets and grow the nation's second largest manufacturing cluster. In Illinois, efforts were coordinated through the Illinois Science and Technology Coalition and World Business Chicago; CMAP's Economic Development Committee was engaged in this process. In 2013, the coalition organized a mega-regional application for pending federal National Network for Manufacturing Innovation funding to build an innovation accelerator.

- In 2012, area community colleges received nearly \$13 million to scale up Harper College's advanced manufacturing training program to nearly 20 area colleges. The grant was the result of collaboration between the private sector, educators, and other stakeholders concerned with the need to enhance workers' skills for advanced manufacturing and grow the workforce to meet increased demand.
- City Colleges of Chicago has partnered with the private sector in its College to Career's reform initiative. Organizing around industries such as manufacturing and transportation, distribution, and logistics, the private sector has taken an active role in designing programs that will build skills are required in today's team-oriented, technology-saturated workplaces.
- Strategies are also underway to support the region's transportation and logistics companies. World Business Chicago's "[Plan for Economic Growth and Jobs](#)," prompted the development of several stakeholder-led groups to identify challenges and opportunities among the City and Region's key industries and growth areas. One such group, WBC's Transportation and Logistics Strategy Team, will help develop a strategy to elevate the Chicago region's status the nation's transportation and logistics hub, with goals to increase local business and jobs, and partner with universities and colleges to better target funding and build a workforce tailored to this industry.
- CMAP is involved with two efforts to better coordinate workforce funding and training. CMAP's Local Technical Assistance program is assisting the [Golden Corridor Manufacturing Group](#) to better coordinate industry partners and educators on addressing workforce needs of the I-90 manufacturing corridor. Additionally, CMAP is engaged with the Chicago Workforce Alliance Industry Partnerships which coordinates the workforce grant making for several area foundations and strategically engages and supports key industries.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Revised to align more closely with CMAP's recent substantive research on industry clusters, and to broaden the specific actions beyond federal and state funding.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
<p>Perform a “drill down” analysis <u>analyses into on specific established industry clusters, including freight/logistics, advanced manufacturing, and biotech/biomed both established and –as well as emerging clusters such as green technology and energy industry clustersies</u></p>	<p>CMAP, Chicago Fed, regional leaders or coalitions around industry clusters</p>	<p>Industry clusters have been researched extensively, but many gaps, practical linkages and pertinent policy responses remain poorly understood. CMAP <u>should continue developing drill-down analyses to understand key drivers of the economy and how the region can foster future growth. Analyses will present data specific to these clusters; identify infrastructure, workforce, and innovation needs; present strategies for coordination and communication; and make policy recommendations. Future reports should include sub-regional analyses that examine a smaller geography and unique opportunities.</u> should direct research toward “drilling down” into specific industry clusters and groups of interrelated firms in the fields of freight/logistics, energy and advanced manufacturing, and biotech/biomed, for starters. <u>Analyses will present data specific to these clusters; identify infrastructure, workforce, and financing needs; present strategies for coordination and communication; and make policy recommendations.</u></p>	<p>Retain<u>Revise</u></p>

Implementation Examples:

- CMAP published the Freight Cluster Drill-Down in 2012 and the Manufacturing Cluster Drill-Down report in 2013. The reports define the cluster, examine recent trends, and consider the impact major national and international developments have on these clusters regionally. Using both quantitative data and information gathered through qualitative research and interviews, the reports include an analysis of the key challenges and opportunities regarding infrastructure, workforce, and innovation. The reports then describe priority areas and next steps to strengthen these clusters.

- Through late 2012 and early 2013, the Workforce Boards of Metropolitan Chicago in partnership with the Metro Economic Growth Alliance of Chicago (MEGA) have published reports on four industry clusters: Biomedical and Life Sciences; Business, Technical and Financial Services; Manufacturing; and Transportation and Logistics. These reports describe the clusters' key strengths, value chain, occupational opportunities, and market opportunities.
- The Illinois Science and Technology Coalition, with the Illinois Nanotech Collaborative and support from the U.S. Small Business Administration developed, "Illinois nanotechnology report: A roadmap for economic development." The research provided an overview of the region's cluster, its opportunities and challenges, analysis of other clusters around the country, and recommendations to harness the cluster's potential. In 2012, Metropolis Strategies, RW Ventures, and Innovation Network for Communities released a study of emerging "green" market's opportunities for metropolitan Chicago. The study included an in depth report on the region's energy efficient lighting cluster.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Revisions reflect the recent work completed by CMAP and partners on cluster analysis, as well as future plans to conduct subregional analyses.

<u>Action</u>	<u>Lead Implementers</u>	<u>Specifics</u>	<u>Retain/Revise/Complete/Delete</u>
<u>Reorient economic development strategies toward key drivers of regional economic vitality</u>	<u>State (DCEO, Governor, General Assembly), local governments, economic development organizations</u>	<u>State and regional economic development policies and practices should be reoriented to better compete in the highly competitive global marketplace. Specifically, strategic plans should set clear investment priorities. Programs and services should be more coordinated and streamlined to improve the experience for businesses and workers. Information and data about these efforts should be accessible and include transparent, routine evaluation. These actions will enable the state and region to develop a more outward-facing strategy to attract and retain businesses and workers, and compete nationally and globally.</u>	<u>New</u>

Rationale for Retain/Revise/Complete/Delete Assessment:

- Propose addition based on recommendations in Drill-Down reports, upcoming CMAP analysis, and shifting attention towards these policy issues.

Implementation Action Area #3: Increase the Commercialization of Research, Target Investment Decisions, and Pursue New Financing Opportunities

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
<p>Bolster or reinstitute successful State programs which assist entrepreneurs and create linkages between researchers and the private sector</p>	<p>State (General Assembly, DCEO)</p>	<p>State elected officials should bolster or reinstitute state programs with a track record of success in assisting entrepreneurs with critical business startup and marketing needs, locating pre-seed and early stage financing, furthering technical or managerial skills, and assisting with new product development and marketing. IEN is one current program along these lines. In addition, the ITEC programs previously awarded funding that could be usedFor example, the state-funded programs like IEN and ITEC provided entrepreneurs with <u>important businesses development support</u> to put together documentation for venture capital or “angel” investors, apply for federal SBIR money, apply for a patent, or put together a business plan. ITEC is currently unfunded by the State. Researching models and their outcomes should be a first step to understand what is most successful and how to implement these strategies.</p>	<p>Revise</p>

Implementation Examples:

- The University of Illinois has released plans to open a research laboratory in Chicago that combines private funding with university expertise in key innovation areas. The lab will join basic research with real-world problems, creating a clear linkage between researchers and the private sector. The University of Illinois has also partnered with numerous public and private entities to organize the region around a National Network for Manufacturing Innovation center that would draw on the region’s advanced manufacturing cluster.
- In addition to the proposed university labs, the State of Illinois is involved in several other partnerships supporting innovation. One example is the Joint Center for Energy Storage Research, a public-private partnership housed at Argonne National Laboratory

focused on advancing battery technology and transferring these breakthroughs into the market through licensing.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Revised to update references of programs and note importance of continued research into programmatic models.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Re-institute the Illinois Innovation Challenge Matching Grant program	State (General Assembly, DCEO)	Some version of the Innovation Challenge Matching Grant program should be reinstated to provide matching funding for federal SBIR and STTR recipients. SBIR and STTR are federal programs funding small businesses working with universities.	Retain

Implementation Examples:

- The [Illinois Science and Technology Coalition](#) analyzed the need to incent and attract federal SBIR and STTR dollars to our state’s economy. In 2012, Illinois businesses won 121 SBIR and STTR awards, totaling approximately \$41 million dollars, in early stage federal funding for feasibility (Phase I) and prototyping (Phase II) projects. ISTC reports that SBIR Phase I awards of up to \$150,000 make up the majority of awards whereas SBIR Phase II awards, which can be as high as a million dollars, account for over half of the total value of all awards.

Rationale for Retain/Revise/Complete/Delete Assessment:

- This continues to be a need as it will help increase the amount of federal funds awarded to companies in the state.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Explore the creation of a major new venture capital fund, at the regional or mega-regional level	State (Governor's office, DCEO), the business community, the Federal Reserve Bank of Chicago, nonprofits, I2A fund, philanthropic organizations	A new venture capital fund should be created to help investors and entrepreneurs create and grow profitable businesses in the metropolitan Chicago region and potentially beyond. The fund should be managed and operated by a private firm, but exploration should be done first by government, civic organizations, foundations, and the private sector. The fund should be targeted toward clusters of regional specialization. A range of private and public revenue sources should contribute to such a fund, and philanthropic organizations can play a large role.	Retain

Implementation Examples:

- In 2012, DCEO launched the Invest Illinois Venture Fund, a new venture capital fund that seeks to support new, innovative companies that show high potential for growth. The fund is part of a larger \$78 million initiative called Advantage Illinois, which includes several funding options for small businesses. The funding came from an initiative within the federal Small Business Jobs Act signed into law in September 2010. With the program underway, State and regional stakeholders can track, analyze, and share the initiative's outcomes to inform improvements to this and future venture capital funds.
- Also launched in 2012, the FireStarter Fund is a group of Chicago based investors focused on supporting the digital technology field. The fund can make investments in companies throughout the U.S. but all the investors are based in Chicago so it is anticipated the investments will be concentrated in the Chicago area and upper Midwest.

Rationale for Retain/Revise/Complete/Delete Assessment:

- While both implementation examples work toward the Action, neither one fulfills it. Thus the recommendation is being retained.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
<p>Create Implement a more robust national innovation policy</p>	<p>Federal (Congress)</p>	<p>Provide more incentives for public/private collaboration around innovation. Provide federal funds that can be leveraged with private resources. Provide competitive funding for regional approaches around specific industry clusters. Many of these types of approaches are being discussed as part of the upcoming reauthorization of America COMPETES, a federal technology, research and education act.</p>	<p>Revise</p>

Implementation Examples:

- The federal government has launched several initiatives that signal a more robust approach to promoting innovation. Originally launched in 2010, the i6 challenge continues to grow and included a new competition in 2012. The program is funding six new partnerships with a \$1,000,000 grant to establish proof-of-concept centers to support innovators and researchers, expand access to capital, and connect entrepreneurs with the resources they need to grow. The initiatives were introduced through the administration’s recent report, “A Strategy for American Innovation” which analyzed domestic advantages and challenges, identified technologies and industries poised for growth, and established priorities to foster innovation and long-term growth. The initiatives incentivize public/private collaboration around innovation, leverage private resources, and encourage regional approaches to support specific industry clusters.
- The Jobs and Innovation Accelerator Challenge brings together several federal agencies to support regional industry clusters. In 2012, the initiative focused on advanced manufacturing and emphasized the importance of public-private partnerships. A proposal from the region was submitted but was not successful. Ten projects were selected and each was awarded approximately \$2,000,000.
- Since the implementation of GO TO 2040, the America COMPETES Act of 2007 was reauthorized. The America COMPETES Act of 2010 is set to expire in 2013.

Rationale for Retain/Revise/Complete/Delete Assessment:

- America COMPETES, a federal technology, research, and education act, was reauthorized in 2010 with spending authorized for 2013. It generally funded existing federal programs. A 2013 reauthorization act has not been passed. The specifics were revised to focus less specifically on this legislation.

Implementation Action Area #4: Create a Culture of Innovation

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Research, compile, and publicize examples of successful innovation	State (DCEO), nonprofits (Chicagoland Chamber, CMC, MEGA, World Business Chicago, <u>ISTC</u>) philanthropic, private sector, universities	Innovation success stories should be collected and publicized. Commonalities of these experiences should be emphasized, and the role of experimentation and perseverance must be taught so that workers, entrepreneurs, and sources of funding see experimentation as an important stepping stone to innovation and growth.	Retain/Revise

Implementation Examples:

- Each year the Chicago Innovation Awards celebrates innovation in the region by recognizing the most innovative new products and services introduced and developed in metropolitan Chicago. Now in its 12th year, the award program provides many benefits—in addition to raising awareness on the innovative companies in the region, winners get access to publicity as well as training and mentoring opportunities.
- Techweek, Inc. holds a Chicago convenes entrepreneurs, researchers, and other innovation leaders through a week-long conference and expo.
- Formed by the Governor to foster innovation in the state, the Illinois Innovation Council promotes the role of innovation in economic growth, convenes academia, business and government, and recommends criteria to measure success. Created by the Council, the Illinois Innovation Network collects and publicizes innovation success stories on its website. The site features stories on innovative companies and identifies the commonalities of these experiences.
- Illinois Innovation Index investigates, compiles, and publicizes innovation metrics and news in the state and region. Each issue includes a “spotlight” highlighting an innovative company or other recent development that demonstrates the region’s ability to foster innovation.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Revised to include the Illinois Science and Technology Coalition as a lead implementer.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Expand and link innovation related training	Nonprofit (Chicagoland Chamber, MEGA, World Business Chicago), universities	There are multiple meeting places , forums , conferences and educational programs that support innovative thinking in the region. These programs should be expanded to reach wider audiences. Educational programs, conferences, and innovation competitions should also be linked so that budding innovators and investors can interact across fields and disciplines to share experiences and foster further innovative thinking.	Retain Revise

Implementation Examples:

- Several organizations focus on supporting entrepreneurs involved in innovation and helping them thrive. [Chicago Innovation Mentors](#) provides innovation training to startups. The [Clean Energy Trust](#) offers business development support in clean energy startup. [Built In Chicago](#) also supports conferences and education in digital startup space. [1871](#) provides a space where start-ups can have access to programming and educational resources, meet with other entrepreneurs, find mentors, and access the venture capital firms interested in tech start-ups.
- Based in the Illinois Science and Technology park located in Skokie, the Oakton Community College nanotechnology education division has recently launched the Nanotechnology Employment, Education, and Economic Development Initiative (NE3I). The program will engage local high schools, provide hands on learning experiences, and include a certificate program.

Rationale for Retain/Revise/Complete/Delete Assessment:

- Wording was revised slightly to broaden the scope of activities.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Reorient philanthropic giving toward innovation	Philanthropic	The region’s foundations are a strong asset and to date have funded extensive efforts in education, arts and culture, and human services. Focusing more on the regional economy and innovation makes sense on many levels for foundations, as these are truly the catalytic investments which can help the region sustain a high level of prosperity and vitality. Foundations can work to support those groups working to organize regional initiatives and policy around a “cluster approach.”	Retain

Implementation Examples:

- [Chicago Innovation Foundation](#) draws on philanthropic donations to fund Innovation Awards, recognizing the businesses and individuals from across the region that are developing breakthrough products and technologies.
- Area foundations are investing in innovation. For example, the MacArthur Foundation has made awards to the Chicago Innovation Foundation and Smart Chicago, a civic organization devoted to improving lives in in Chicago through technology.

Rationale for Retain/Revise/Complete/Delete Assessment:

- This action remains a priority for CMAP and the region.

Action	Lead Implementers	Specifics	Retain/Revise/Complete/Delete
Identify opportunities for state and local regulatory reform and modernize local ordinances	State (DCEO), municipalities, nonprofits (Chicagoland Chamber, MEGA, World Business Chicago), the business community	Review and implement reforms in existing state and local regulations, especially in areas of rapidly changing technology and changes in federal regulation. Convene innovative companies to learn about potentially limiting local regulations or ordinances. Provide model ordinances that contain language about up-to-date regulation and how to keep it updated. Review validation, information sharing, and technical assistance programs for new technology development and implementation. Recommend updates as appropriate.	Retain

Implementation Examples:

- The [Plan for Economic Growth and Jobs](#) by World Business Chicago identifies permitting and regulations as a barrier to business growth. Firms cite costly and time consuming bureaucratic processes and regulations as barriers to innovation and commercialization. For example, the plan describes how manufacturers must interact with numerous city departments as well as their local alderman to address zoning, services, and regulation. The implementation of the plan’s 10 strategies is underway and will work to address these regulatory issues.

Rationale for Retain/Revise/Complete/Delete Assessment:

- This action remains a priority for CMAP and the region.