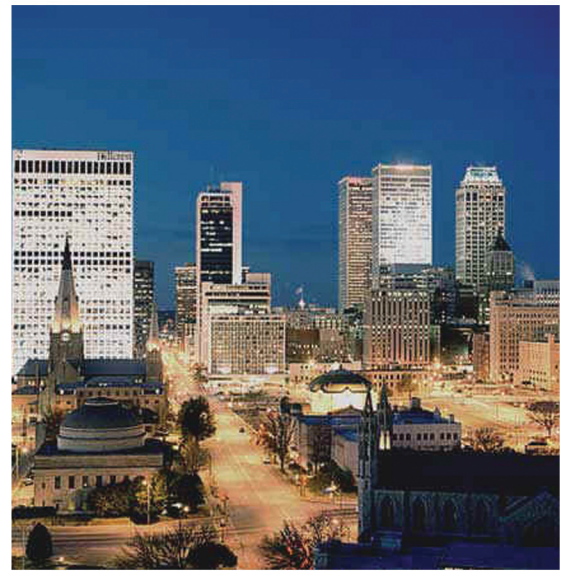# 2013 INCOG-EDD Economic Development Plan
## Comprehensive Economic Development Strategy (CEDS)

Approved and Submitted by

**INCOG**

INCOG Economic Development District
to the

US Department of Commerce
Economic Development Administration

# TABLE OF CONTENTS

# 2013
# Comprehensive Economic Development Strategy (CEDS) Creek, Osage and Tulsa Counties, INCOG Economic Development District

## Introduction

In 2008, the INCOG Economic Development District was designated by the Economic Development Administration.  INCOG is submitting this updated Comprehensive Economic Development Strategy (CEDS) as we reevaluate and establish the regional economic development framework for the three counties within the INCOG Economic Development District (EDD), Creek, Osage and Tulsa.  The CEDS serves as a description of the current Tulsa area economic and workforce development status, in order to identify opportunities, and employ local, state and federal funds to meet current and emerging regional economic growth needs.  Located in the northeastern corner of Oklahoma, the Tulsa metro area is home to more than 950,000 people.  It is comprised of rolling green hills, several lakes, diverse population, and an emerging urban core.

The Economic Development Administration, a bureau of the US Department of Commerce, governs the requirements and funding of projects within Economic Development Districts.  Funding for the CEDS planning is provided in part by EDA. Oklahoma is one of five states, which comprise the Southwest Region (Texas, Louisiana, Arkansas, Oklahoma, New Mexico).   Current **investment programs** designed to assist regions are identified by EDA as providing maximum results for today's economy - *thus, EDA supports:*
- Collaborative Regional Innovation
- Partnerships
- National Strategic Priorities
- Global Competitiveness
- Environmentally-Sustainable Development
- Economically Distressed & Underserved Communities

Current **national strategic priorities** seek to further economic development through:

> *Clean energy & green technologies*
> *Sustainable manufacturing*
> *Information technology infrastructure*
> *Communities impacted by auto industry restructuring*
> *Natural disaster mitigation & resiliency*
> *Access to capital for small/medium & ethnically diverse enterprises*
> *Innovations in science, healthcare & alternative fuel technologies*

To the extent possible, the INCOG EDD goals and strategies should **demonstrate regional progress** on most, if not all of these priorities.

In recent years several initiatives and strategic activities have led to the development of EDA funded public/private partnerships among several constituencies. These efforts are integral to this updated strategic planning document as described below. **For additional information, contact INCOG, 918.584.7526 or its website:** www.incog.org

*Photo credit: alanoftulsa*

In May, 2012, Oklahoma was awarded a $1.9 million multi-agency challenge grant, which includes EDA, National Institute of Standards and Technology, Department of Energy, Department of Labor's Employment and Training Administration, the Small Business Administration, and the National Science Foundation.  The award supports Oklahoma State University's New Produce Development Center project, Oil and Gas Industry Supply Chain and Marketing Cluster, with additional grant funding from the Oklahoma Manufacturing Alliance.  Joining these

partners on the project are the Oklahoma Department of Commerce and Oklahoma Application Engineer Program.

# Vision & Goals

The INCOG Economic Development District seeks to capitalize on its assets and provide direction for a strategic action plan that is collaborative, competitive, supports entrepreneurship and secures a strong quality of place.

Acknowledging the history and diversity of this region strengthens our ability to enrich economic development efforts.  The District encompasses communities that include a range of characteristics - rural, suburban and urban.  These diverse attributes offer our region the "**best of both worlds**".  Notable resources exist within close proximity: the urban Art Deco and historic districts, world-class museums, modern venues and eclectic elements, recreational trails, higher education institutions, and young professionals.  Rural areas feature vast open spaces, natural resources, lakes, Native American population and culture, small town America Main Streets, Cross Timbers, the Tallgrass Prairie, and Keystone Ancient Forest Preserve, offer growth, expansion and tourism opportunities.

Abundant resources and a rich history serve as a foundation for citizens and businesses that are culturally innovative.  The District planning participants seek to synchronize these qualities in establishing FIVE ECONOMIC DEVELOPMENT DISTRICT GOALS:

    I.    *Ensure a healthy, attractive and sustainable environment, vibrant, thriving communities and a high quality of life for all the region's residents.*

    II.    *Foster a regional business climate that supports high quality private investment and job creation.*

    III.    *Ensure residents have better access to living wage jobs and employers have access to world class talent.*

    IV.    *Harness and capitalize on the entrepreneurship and technology innovation assets in the region.*

    V.    *Advance the region's transportation infrastructure to meet the demands of a globally connected modern economy.*

# Development of Partnerships

With the engagement and cooperation of local elected officials, the professional staff of INCOG provided organization, research, and support to fully nurture the original 2008 CEDS planning and development process.  Their efforts were complemented by the economic development staff of the Tulsa Regional Chamber.  A variety of successes, have occurred which have helped sustain our economy, drive future regional economic development goals and strategies.

INCOG has traditionally led in the area's product development with the Tulsa Regional Chamber.  These associations, along with city, county, tribal, and economic development organization leaders and professionals, manage the programs, projects and prospects that propel the region's economic growth.  Each of these partners has a strong record of committed, dynamic and influential leadership throughout the area.  In preparing the **2012 CEDS**, combining these forces again ensures future success through the marriage of public and private interests, which brings a proven system of research, analysis, design and development in considering the best direction for future activities.

The prosperity of the Tulsa region depends on our ability to collaborate across geographic and political jurisdictions, and to effectively communicate our shared priorities to citizens, business and the public sector a solid plan for shaping our future.



*Osage County Industrial Authority Business Incubator, Pawhuska*

# INCOG Economic Development District CEDS Committee Members:

**Wes Mitchell, HP Enterprise Services**

**Shelley Cadamy Munoz, Workforce Tulsa**

**Michael Willis, Tulsa County**

**Ted Fisher, City of Sapulpa**

**Jimmy Seago, Osage County**

**Elissa Baker, Tulsa Regional Chamber**

**Chuck Prucha, OK Manufacturing Alliance**

**Justin McLaughlin, Tulsa Regional Chamber**

**Ron Bussert, OSU-Tulsa**

**Susan Neal, University of Tulsa**

**Gerard Clancy, OU-Tulsa**

**Tom McKeon, Tulsa Community College**

**Edward Red Eagle, Osage Nation**

**Monika Bhow Ford, Indo-American Chamber**

**Annie Tomecek, Funders Roundtable**

**Candy Thomas, Osage Co Industrial Authority**

**Clay Bird, City of Tulsa**

**Rachel Hutchings, WIA & Oklahoma Aerospace Alliance Board**

**Norm Stephens, Broken Arrow**

**Trish Richey, City of Bixby**

**Linda Tate, City of Bristow**

**Terri Cleveland, City of Broken Arrow**

**Pam Polk, City of Collinsville**

**Ron Dyer, Drumright**

**Mike Tinker, City of Jenks**

**Chelsea Levo, City of Owasso**

**Rocky Rogers, City of Sand Springs**

**Paul McAlexander, City of Pawhuska**

**Mike Nunneley, Creek County Municipalities**

# CEDS Planning Process

This new CEDS Strategy Committee, appointed in 2012 by the EDD Board, serves as a permanent standing committee and is responsible for developing the strategic plan, monitoring the performance of the INCOG EDD staff, evaluating the implementation of the CEDS document and overseeing any modifications or updates that occur in the future. Membership of the CEDS Committee is comprised of representatives from the private sector, local municipal and county governments, economic development organizations, Native American tribes, manufacturing and aerospace alliances, public and private universities, community colleges and technical schools.

**EDA's directive** for the current plan asks districts to, "Transform the CEDS process into strategy-driven planning focused on regional visioning, priorities and performance outcomes vs. a broad encyclopedia with laundry lists of programs and projects."  Further, we are to, "Use modern scenarios, data analysis tools and planning techniques, evidence based and factual information."

This CEDS Update was developed during the latter half of 2012 and 1st quarter of 2013 by the INCOG Economic Development staff under the direction of the INCOG EDD Board and the CEDS Strategy Committee. Members represent the entire three-county INCOG Economic Development District.  The board and staff will continue to strengthen its relationship with educational institutions, Workforce Tulsa, city and county leaders, Native American tribes, Chambers of Commerce, foundations and the private sector.

# CREEK, OSAGE & TULSA COUNTIES

## INCOG Economic Development District



Per Capita Income for US
(2007-2011 ACS) = $27,915

**Legend**
- County Boundaries
- County Boundaries
- Highways

**2010 Census Tracts**
**Per Capita Income**
- <= 80% of National level ($22,332)
- > 80% of National level ($22,332)

Source: American Community Survey Data 2007-2011
Date: 2/19/2013

This map is provided as a public resource for general information only. Although every effort has been made to produce the most current, correct and clearly expressed data possible, all geographic information has limitations due to scale, resolution, date and interpretation of the original source materials. The information on this map is collected from various sources that can change over time without notice. Therefore, the information provided is not intended to replace any official source. You should not act or refrain from acting based upon information on this map without independently verifying the information and, if necessary, obtaining professional advice. The burden of determining the accuracy, completeness, timeliness of information rests solely on the user. Copyright © 2012 INCOG

**ECONOMIC DEVELOPMENT ADMINISTRATION**
**CEDS**
**INCOG ECONOMIC DEVELOPMENT DISTRICT**
*Creek, Osage, Tulsa Counties*

**ECONOMIC DEVELOPMENT DISTRICT BOARD**
9 Members

**STRATEGY COMMITTEE**
*Stakeholders Group*
29 Members

*STAFF COORDINATION TEAM - INCOG*

**CEDS PROGRAM PLANNING**
September 2012 – January 2013

**2008 CEDS & Annual Report Action Plan Strategies**
Review existing EDD agreement, by-laws, federal rules & requirements; Approved & submitted by INCOG EDD to US Dept of Commerce, Economic Development Administration Background, Goals & Objectives, Strategic Projects, Action Plan, Measures & Organization - Results

**Statistics, Demographics & Tulsa's Future**
Update Census & demographic data, review information & statistics regarding current business, cluster & employment conditions including Tulsa's Futures updates, funding, jobs & goals

**Articles, Reports & Other Area Studies**
Review existing research new reports & articles regarding state of current economy, trends & future potential. Review area plans: Sustainability, Transportation, PlaniTulsa, Oklahoma Aerospace Alliance Strategic Plan, Tulsa Airport Authority Strategic Business Plan, Arkansas River Master Plan, Osage County Comprehensive Plan, Task Force on the Selection of Target Clusters

**2012 CEDS Update**
Prepared, approved & submitted:
CEDS Strategy Committee
EDD Board
Economic Development Administration

**ORGANIZATIONAL CHART**
*Partners, Members*
*Comprehensive Economic*
*Development Strategy*
*2012 Update*

# Methodology for Integrating Regional Economic Priorities

Tulsa's Regional Chamber developed a list of **target industries**, which is used as not only a focus for direction and resources but also provides continuity for planning and strategy. These sectors remain prominent within the region and produce the greatest number of businesses, employees, wages and economic impact. They are as follows:

i. Energy
ii. Aerospace
iii. Professional Services
iv. Advanced Manufacturing
v. Health Care
vi. Transportation & Logistics

Emerging targets include:

i. Information Security
ii. Entertainment & Tourism



*Tulsa International Airport*

In support of these industries, as well as to enhance quality of life issues for the region, the following state and **local strategic planning** efforts and initiatives were analyzed in preparation for the development of the 2012 INCOG EDD Comprehensive Economic Development Strategy:

1. *Strategic Plan*, Governor's Council for Workforce and Economic Development
2. *Northeast Oklahoma Regional Profile*, Oklahoma Department of Commerce
3. *Vision 2025*, September 2003, Tulsa County
4. *City of Tulsa Sustainability Plan*, 2011, City of Tulsa
5. *Tulsa's Future II Strategy*, Tulsa Regional Chamber
6. *PLANiTulsa*, 2010, City of Tulsa
7. *Connections 2035 Regional Transportation Plan*, INCOG

8. *Fast Forward – Tulsa Regional Transit System Plan*, 2011, INCOG
9. *Aerospace Industry Skills Gap Analysis, 2010*, Oklahoma Aerospace Alliance
10. *Strategic Plan for Growth of Oklahoma Aerospace Industry, 2009*, Oklahoma Aerospace Alliance
11. *Tulsa Airport Authority Strategic Business Plan, 2008-2018*
12. *Arkansas River Project Completion Report, 2011*

These plans, along with additional research and measurement of current conditions, inform staff and committee members of INCOG and the Economic Development District (EDD).  The role of the plan is to provide assistance to local governments and economic development agencies in securing Economic Development Administration (EDA) funding.  INCOG works to ensure that viable **economic development principles and projects** are proposed for funding by EDA while identifying additional potential funding agencies and programs.  Insofar as other economic development agencies among our partners have experienced and trained staff, the INCOG and the EDD board will work closely with these groups to ensure effective coordination and possible leveraging of funds.

INCOG's EDD board is continually involved in various regional efforts statewide and within the District.  These include the Oklahoma Association of Regional Councils (OARC),

*Tulsa office of i2E, 2012*

Oklahoma Department of Commerce (ODOC) the Tulsa Regional Chamber, cities, and counties and with strategic planning initiatives such as PLANiTulsa.

Representatives of each member community are appointed to the
INCOG organization's Board of Directors, which serves as a forum for
cooperative decision-making on issues of regional significance.  A
primary function of INCOG is to conduct the planning process for the
**Transportation Management Area** (TMA).  Transportation plans and
programs are based on a coordinated and comprehensive planning
process, including analysis, conducted in cooperation with local and
state governments.  The transportation planning process involves both
long-term transportation system objectives and short-term
implementation of projects.

Long-term objectives are highlighted in the *Tulsa Metropolitan Area
Major Street and Highway Plan*, which represents the ultimate roadway
plan for the area, and the *Regional Transportation Plan*, which identifies
planned transportation improvements to be implemented within the
next 20 to 25 years. Short-term projects are outlined in the
*Transportation Improvement Program*, which identifies the projects to
be undertaken during the upcoming four years through outreach to
obtain broad-based input from interested citizens and targeted
populations.

Finally, we must acknowledge that many **economic successes** over the
past ten years are a direct result of previous planning efforts, which
have been implemented.  Policies and activities promoted in earlier
initiatives garnered support and resources that lead directly to
investment and job creation.

## INCOG Economic Development District Projects Review

Since the adoption of the CEDS for the INCOG district in 2008, more
than $6 million in EDA funds have been awarded to nine area projects.
Each of these projects corresponds to goals and initiatives reflected in
the original 2008 CEDS; some projects are completed and others are
underway:

1. *2008, Arkansas River Corridor preliminary engineering design - $500,000*

2. *2009, Long-Term Industry Plan: Center for Regional Innovations, i2E expansion & program support - $350,000*

3. *2010, Osage County Industrial Authority Business Incubator - $750,000*

4. *2010, Oklahoma Centennial Botanical Garden - $1,000,000*

5. *2011, Tulsa Community Supercomputer - $800,000*

6. *2011, Tulsa Economic Development Corporation for The Forge - $600,000*

7. *2012, Tulsa Industrial Authority Blue Dome Streetscaping - $200,000*

8. *2012, City of Sapulpa Industrial Park Infrastructure - $1,500,000*

9. *2012, i2E Entrepreneurial Services - $393,756*



*Blue Dome District, downtown Tulsa*

Ultimately more than 500 jobs will be created as a result of these initiatives.  Infrastructure development, entrepreneurial support, small business creation, tourism, technological innovation and revitalization are represented in these projects, all well-defined outcomes of all **regional EDA-funded efforts**.

# Trends

In preparing our short-term strategy, based upon providing a broad approach to economic development, our leaders understand the importance of promoting a vital, robust community and improved quality of life will serve to retain and attract people and businesses. Firms are merging, moving, consolidating and changing business models.  They seek the best overall geographic environment in which to site and to grow.  Our region has much to gain from taking bold action to secure its future.  Factors identified as crucial to **21<sup>st</sup> Century** success include targeted improvements in education, recreation, leadership, diversity, public and private capital investment.

The Oklahoma Department of Commerce publication, *Community Developer*, recently featured an article by Ventura, California mayor William Fulton entitled 'Jobs Aren't Enough'.  Fulton's column refocuses the traditional economic development model of job creation as the goal and introduces the larger concept of a healthy economic community ecosystem.  He clearly states, "These are the subtleties of economic development today that cannot be captured by measuring what we traditionally call 'jobs.'  They are measured by other things: venture capital available...skills in the workforce...value of local philanthropic endowments...number of startups and household income."  In the end, Fulton says, "If economic development is about the enduring prosperity of communities... you are much likelier to build a solid foundation for the future."  Our regional CEDS team must work to identify, track and support all resources, data, and systems that fuel these community-based organisms of growth.

As economic development evolves, our regional leaders must recognize alternative transportation is a prominent factor cited in relation to progress and success. Community vitality is directly impacted by diverse forms of transportation infrastructure,

13

especially bus, street car, rail, bicycling, running and walking trails. Sustainability is now incorporated into most, if not all, federally-funded project opportunities and ranges from energy conservation to public health.  The millennial generation increasingly espouses an aversion to cars and many cities are ranked by their "walkability score."  There is greater awareness, as well, that walking and biking provides a healthy environment and outcome, which reduces obesity and chronic diseases.

Another important trend is the emergence of young professional groups throughout the state.  Tulsa Young Professionals – TYPros – boasts more than 6,000 members.  The group organizes around a leadership team and nine "crews," which include a Government Relations crew, Business Development, and Urbanists, who promote and advocate for progressive development that attracts and retains young professionals and establishes Tulsa and TYPros as leaders of the community redevelopment process.  This group is a powerful collective of talent and innovation within the Tulsa area, supports a diverse constituency, and is our foundation for the future.

## Overview of Recent Regional Economic Development Initiatives

There have been several amazing successes through initiatives beginning in 2003 and continuing through 2012.  Much of the early effort was based on a regional endeavor to define and invigorate the economy as it emerged from the 2002 national recession.

### INITIAL VISION 2025 EFFORT



In 2003, public and private sector community leaders came together to support and pass an impressive and nationally recognized $550 million investment in public projects known as Vision 2025.  These projects continue to pay dividends throughout the region. Public involvement and participation numbered in the thousands, which was instrumental to the achievements.  The Vision 2025 mission

statement shows the linkage between that successful undertaking and the economic development strategies contained within the current INCOG Comprehensive Economic Development Strategy, or CEDS.

- *"In partnership with all of the communities in the region, we will present multiple economic activity centers anchored by a strong downtown Tulsa."*
- *"Our region will exhibit a spirit of cooperation and collaboration among governmental entities and with the private sector that is the envy of the nation."*
- *"We will have a healthy business environment that encourages the development of quality jobs."*

A Vision 2025 website was established as a portal for information regarding project status updates and continued involvement in what has become known as the "Vision Process". A more detailed history and current listing of projects, funding and implementation is available on the site: *http://www.vision2025.info/.* Vision 2025 has successfully served as a catalyst for economic development, public and private, throughout the area. Since its implementation began, the Vision 2025 investment in downtown Tulsa, for example, has resulted in more than $500 million additional private sector real estate investments and new construction. These projects include hotels, television stations, multi-family housing, restaurants, offices, and non-profit cultural venues.



**Tulsa's Future** – This economic development initiative of the Tulsa Regional Chamber, which was an initial response to the mission statement of Vision 2025, works toward the recommendations of the five task forces arising from the Regional Economic Development Leadership Summit of 2003. It's still going strong today. Funds are used to staff efforts whose goal is to bring 10,000 high-paying jobs to the area and an additional 16,000 well-paid secondary jobs. It represents a pro-active approach to economic development and focuses on growing

innovation assets and targeted industry clusters in the Tulsa Area. The projected cost of this initiative is $9,000,000 with investment primarily by the private sector. It strengthens the area's ability to attract the quality jobs and talent it wants and needs and induces a growing sense of regional cooperation.  One highlight is, in January 2013, Verizon announced expansion of its financial services group, ultimately adding more than 500 new jobs.

**TULSA'S FUTURE NEW JOBS ANNOUNCED**
**January 2013**
**Total jobs created: 907**
**Total new jobs with a salary less than $50,000 annually: 777**
**Total new jobs with a salary greater than $50,000 annually: 130**

**Sum total of Tulsa's Future II since 2011**
**Total jobs created: 12,615**
**Total new jobs with a salary less than $50,000 annually: 5,313**
**Total new jobs with a salary greater than $50,000 annually: 7,302**

**Fast Forward: Regional Transit System Plan** – A 21<sup>st</sup> Century view of the public transit system, was conceived and adopted in 2011.  This effort was led by area cities, some of which are included in the ED District, Bixby, Broken Arrow, Jenks, Owasso, Sand Springs and Tulsa along with local and federal transit representatives.  The plan recognizes that the historical and existing networks of freight, rail, streetcar tracts, arterial roadways, interstate highways, bridges, bus service, airports and river ports have supported development and growth in the region.  Included in the plan are Tulsa County and portions of Creek and Osage, and their municipalities.

Fast Forward employed a process of extensive public outreach and data-driven technical research.  Among its guiding principles were to *Achieve Regional Consensus, Enhance Mobility, and Consider Economic Development.*  Important commuter corridors were identified and are located within the ED District through a preliminary needs assessment evaluation; those are, Airport/Owasso, Broken Arrow, Jenks/Bixby, Sand Springs, Sapulpa and State Highway 51.  Transit infrastructure may

require significant capital investment to implement; however, small scale improvements we re thus identified as well. Overall, this plan allows the region to position itself to compete to attract more jobs and a diverse set of industries.

**PLANiTulsa** – Adopted in 2010, the City of Tulsa's updated Comprehensive Plan presents the long-term aspirations for how Tulsa will look, feel, and function in the future. It serves as a guide to set planning goals and policies, and to measure their outcomes. The plan arrived at a critical juncture in the city's history and represents the persistent will and drive to reinvigorate downtown and the broader economy through land use planning.

Economic Development was one of five key components cited in the Comprehensive Plan. The PLANiTulsa strategy is focused on Tulsa's classic strengths, like aerospace, energy, and healthcare, while also supporting new entrepreneurs growing industries for the future. In addition, Tulsa is enhancing coordination of zoning, planning, community and economic development functions.

**Tulsa Area Clean Cities** – As a chapter of the US Department of Energy Clean Cities Program, INCOG coordinates a voluntary organization made up of local and state government agencies, private companies, and non-profit organizations. These partnerships work to enhance energy security, promote energy independence and advance environmental quality. In addition, INCOG's Environmental and Engineering Services



Division administers an Energy Efficiency and Conservation Block Grant program for Tulsa and Creek Counties. These programs serve the economic development goals of the previous and current CEDS. The City of Tulsa has committed to becoming more sustainable and reducing our ecological impact by increasing energy and resource efficiency, moving toward renewable energy sources for our buildings and alternative fuels for its fleet, and promoting smart growth within Tulsa. They now employ a Director of Sustainability and recently completed a

comprehensive Sustainability Plan.  A major initiative of these partners is working to expand the use of Compressed Natural Gas for vehicles, also a high priority for the State of Oklahoma.

**Brownfields Area-Wide Planning Pilot Program** – Tulsa was one of 23 communities across the US selected in 2011 for a $175,000 grant to facilitate community involvement in developing an area-wide plan for brownfields assessment, cleanup and subsequent reuse.  The federal pilot program represents a partnership of HUD-DOT-EPA effort.  As a recipient the City of Tulsa grant funds will direct technical assistance from the EPA to further community-based partnerships, creating a planning framework to advance economic development and job creation.  The City of Tulsa has applied for a $1.5 million Brownfields Revolving Loan Fund Grant to facilitate redevelopment of various sites within the City as well as two Clean-Up Grants.

**ARRA** – On Feb. 13, 2009, Congress passed the American Recovery and Reinvestment Act of 2009 at the urging of President Obama. A direct response to the economic crisis, the Recovery Act has three immediate goals:   Create new jobs and save existing ones; Spur economic activity and invest in long-term growth; and Foster unprecedented levels of accountability and transparency in government spending.  The three counties that comprise the INCOG ED District were awarded a cumulative total of $429,767,559; as of March 2012, $332,783,641 has been received for a reported 221 jobs created.

**Other District Initiatives** – Cities, towns and counties within the INCOG Economic Development District are strengthening the area economy through efforts tailored to each community:

- *Sand Springs* is updating its marketing efforts, as it offers new and expanding businesses prime commercial development sites, financial

and tax incentives; they recently approved a (Tax Increment Financing (TIF) district to assist in the redevelopment of public property for a private manufacturer.

The City was awarded $2.9 million in American Recovery & Reinvestment Act funds for infrastructure projects.

- Central Tech in *Drumright* constructed and opened in 2011, a $2 million state-of-the-art pipeline and safety training center.  The 16,000 sq ft facility is completely customized to meet the 21$^{st}$ Century technical training needs of the oil and gas pipeline industry leading to high-wage careers.
- *Broken Arrow* reconstituted its economic development organization in 2011, with new executive level staff.  Together with local leadership they're committed to future development through a strategy of a sustainable economy, long-term vision, high-wage business growth and employment opportunities.
- *Osage County's* 2030 Comprehensive Plan was adopted in 2011.  County Commissioners and the Industrial Authority worked jointly to initiate its first-ever land use plan, serving as the basic tool for future physical and economic development and set forth policies to guide decisions and coordination of the public and private sectors toward established goals.
- Tulsa Airport Authority is developing a comprehensive plan that envisions the area as an employment center to complement the cluster of aerospace-related companies in close proximity to the airport.  They recently submitted a request to EDA for Technical Assistance funds for an analysis of the potential for industrial development anchored by a multi-modal transportation facility.
- George Kaiser Family Foundation purchased 55 acres of land adjacent to Tulsa's RiverParks for expanded park area.  The non-profit will unveil plans in 2013 to create added public gathering space and enhance the parks system while preserving the natural ambiance with an investment of more than $100 million.

*Plans for rowing & recreation on the Arkansas River*

- The riverfront on the east and west banks of the Arkansas River in Tulsa and Jenks is known as Riverfront South.  The *City of Jenks* established  by Comprehensive Plan, a Riverfront Entertainment District, implemented by zoning categories of River Orientated Commercial and Riverfront Tourist Commercial.  The district is anchored by existing development, River Spirit Casino, RiverWalk Crossing, Kings Landing and the Oklahoma Aquarium campus.  The district's purpose will allow expanded cultural, recreational, lodging, restaurant and retail facilities designed to incorporate waterfront amenities and linkage to the riverfront activities creating time elements for tourism to the region and extending the stay of visitors to the Tulsa region.



- The *City of Bixby* is focused on proactive commercial growth with emphasis on providing a diverse product to include tourism and shopping to meet the needs of the area focusing on the South Memorial arterial corridor as well as the riverfront areas.
- Indo-American Chamber of Commerce is working to increase awareness about the organization, businesses, and networking opportunities.

# Economic Development District Area Demographics

The CEDS project area encompasses Tulsa, Osage and Creek Counties in the State of Oklahoma and area reflects urban, suburban and rural characteristics, contains several cities/towns of varying size and economic/social diversity.  These three counties are at the heart of a larger economic region represented by the designated Tulsa Metropolitan Statistical Area (historically five counties and most recently designated in the 2000 Census as seven counties).  Beyond the MSA, Tulsa has a labor draw that comes primarily from 10 counties that contain a total population of over one million residents. The area is also home to three major American Indian tribes including the Osage, Cherokee and Creek Nations.

With an area of 587 square miles, Tulsa County is largely urbanized and has 10 cities/towns within its borders:  Bixby, Broken Arrow, Collinsville, Glenpool, Jenks, Owasso, Sand Springs, Skiatook, Sperry and Tulsa, which serves as the county seat.  With a population of more than 603,400, Tulsa County is the densest at 988 persons per square mile. New census data places the **Tulsa Combined Statistical Area** at over one million in population.  This includes the counties of Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, Wagoner, Washington, Muskogee and Cherokee.

The Arkansas River bisects the county and one Interstate Highway, four US Highways and three state routes serve the area.  Tulsa International Airport, a designated small-hub, serves the region and is located in the northeastern quadrant of the County. 2012 Statistics for TUL Include: Enplanements: 1,325,139, Aircraft Operations: 99,720, and Total Cargo (in tons): 56,372.  The facility is served by two railroads and is home to 72 companies which employ over 13,000 area residents.

To the northwest, Osage County has a huge, basically rural, geographic area of 2,251 square miles with a relatively small population of 47,472, centered in smaller cities and towns - Avant, Barnsdall, Burbank, Fairfax, Foraker, Grainola, Hominy, county seat Pawhuska, Shidler and Wynona. The number of persons per square mile is 21.  The City of Sand Springs,

the City of Skiatook and the City of Tulsa all include land area in both Tulsa and Osage Counties.  Osage County is home to the historic Osage Indian Reservation.  The setting is high plains, rolling hills, rich farm and cattle lands and the Nation's largest preserve of Tallgrass Prairie with 2,000 buffalo.   All subsurface minerals, including oil, are owned by the Osage tribe and held in trust for them by the Federal Government.  Osage County is linked to the region via US Highway 75 and State Route 99.

Creek County, located to the southwest of Tulsa, encompasses 970 square miles and a population of 69,967.  The number of persons per square mile is 70; approximately 30% of the population lives in the county seat of Sapulpa.  The county is largely rural with some population centers such as Bristow, Drumright, and Mannford being the largest.  Smaller communities, Depew, Kellyville, Kiefer, Mounds, and Oilton, represent most of the remaining population.  These cities were founded in the late 1800's with the emergence of railroad and discovery of oil; by 1920, the county population was approximately 62,000.  Creek County is primarily linked to the region by Interstate 44, US Highway 75 south and US Highway 66, SH 97 and the Creek Turnpike.



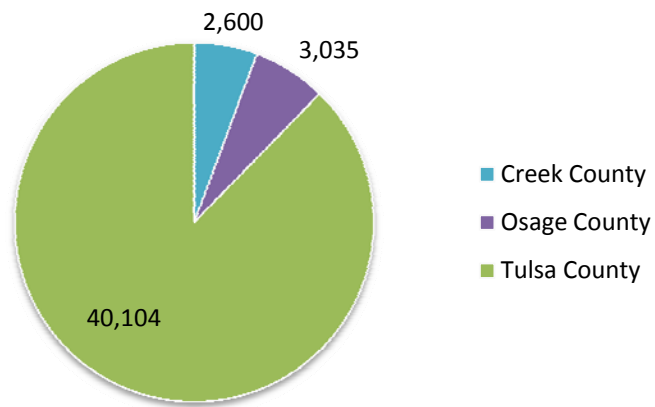*Route 66 Cyrus Avery Plaza, 11<sup>th</sup> Street & Southwest Blvd., Tulsa*
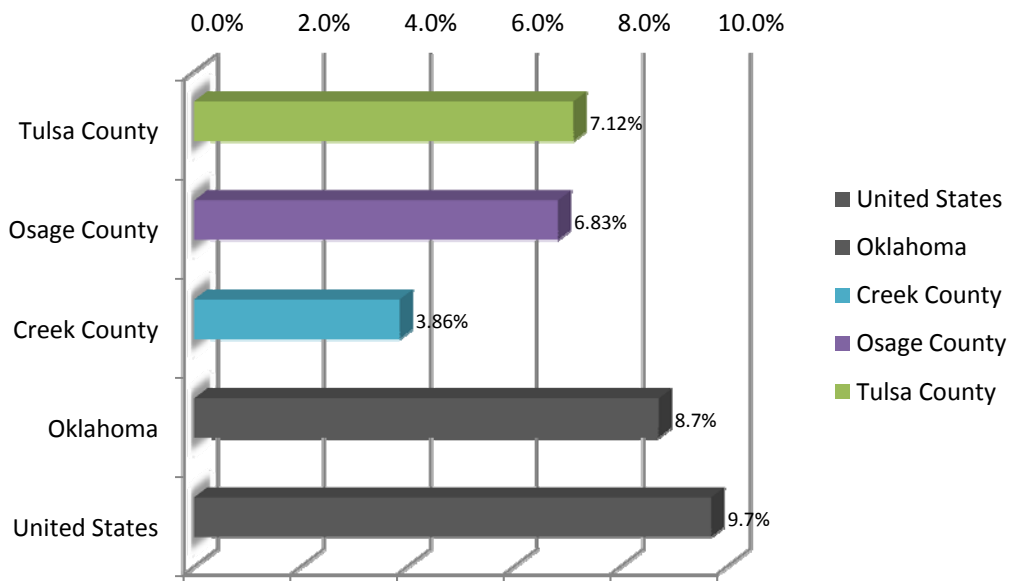
# Total Regional Population - 2010 ED District

69,967

47,472

603,403

- Creek County
- Osage County
- Tulsa County
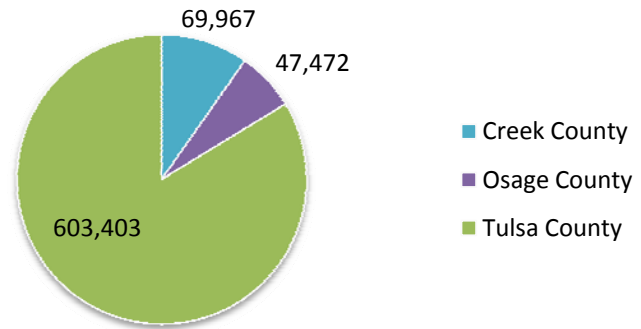
Population, Poverty and Unemployment rates, 2000-2010

| Demographics* | Tulsa County | Osage County | Creek County |
|---|---|---|---|
| **Population** | | | |
| 2000 Census | 563,299 | 44,437 | 67,367 |
| 2010 Census | 603,403 | 47,472 | 69,967 |
| Net Gain | 40,104 | 3,035 | 2,600 |
| 2000 – 2010 Growth | 7.12% | 6.83% | 3.86% |
| **Households** | | | |
| 2000 Census | 226,892 | 16,617 | 25,539 |
| 2010 Census | 241,737 | 18,205 | 26,289 |
| Net Gain | 14,845 | 1,588 | 1,250 |
| 2000 – 2010 Growth | 6.54% | 9.56% | 4.94% |
| **Income** | | | |
| Estimated Median Household Income | $45,748 | $39,918 | $42,075 |
| Estimated Per Capita Income | $26,417 | $20,986 | $22,036 |
| % Below Poverty Level | 15% | 13.2% | 12.2% |
| ***2007 - 2010 ACS Data*** | | | |
| Unemployment Rates 2008/2010 | 5.0/6.2% | 5.1/5.8% | 7.2/8.2% |

# Total Net Gain, 2000-2010

2,600

3,035

40,104

- Creek County
- Osage County
- Tulsa County

## Comparative population growth rates, 2000-2010

| | 0.0% | 2.0% | 4.0% | 6.0% | 8.0% | 10.0% |

Tulsa County — 7.12%

Osage County — 6.83%

Creek County — 3.86%

Oklahoma — 8.7%

United States — 9.7%

- United States
- Oklahoma
- Creek County
- Osage County
- Tulsa County

*Source: US Bureau of the Census 2000 & 2010, American Community Survey 2007-2009 & 2008-2010*

*www.City-data.com*

24

# Population & Employment

As a whole, the population of the INCOG Economic Development District has grown, as depicted on the previous charts and graphs. However, in comparison to the growth rates of the state and nation, the Tulsa region has not kept pace.  Despite a relatively strong economy, central geographic location and low cost of living, population growth has been slower than many peer cities.

The area unemployment rate of 6% is lower than the 8% rate for the US.  This more favorable rate is in large part due to growth in the oil and gas industry, a hallmark of the region as well as the state.  Construction and manufacturing saw the largest gains in employment.  A recent report by the Oklahoma Employment Security Commission (OESC) indicated the Tulsa area unemployment rate moved up .3% during two months of the final quarter 2012.  "In Tulsa, 16,324 people are looking for work in a labor force of 297, 515," according to the OESC.

**American Airlines – Filed for Chapter 11 bankruptcy protection in 2011.  For more than 50 years, Tulsa has been a key part of the company's operations as the home of its largest maintenance operation.  Today, the plant employs about 7,000 workers.   More than 2,100 layoffs have been announced in the Maintenance Repair & Overhaul facility.  It is estimated this reduction will result in significant negative impacts to the area quantified as:**
- **$372 million reduction of Tulsa's Gross Metropolitan Product**
- **3,581 direct and indirect jobs lost**
- **$15.6 million less area personal income**
- **$4.5 million lost Oklahoma state income tax collections**
- **$5.53 million less for Tulsa's city sales tax collections**
- **$1.04 million reduction in Tulsa County sales tax collections**

*A merger was announced in February 2013 with US Airways. If approved, the deal would create the world's largest airline company. This is regarded as a positive development for AA but the implications for the Tulsa-based operations are unclear at this time.*

*Population and employment increases are directly correlated with educational success.* Of particular significance to population and employment growth is that over the past half century, those regions, internationally as well as in the United States, with higher math and science skills have grown faster than those with lower-skilled populations.

Oklahoma's low national rankings in K-12 education have been a fixture in the state and region for many years. Recently, the US Chamber of Commerce gave Oklahoma's public school system an "F" in student achievement. Statistics indicate that more than 30% of high school graduates require remedial courses at the higher ed level. Recruiting from the local market, for example, in the growing field of advanced manufacturing, experienced technicians, specialized construction trades, and some engineering positions is very difficult. This remains an issue not only in workforce training but in attracting and retaining talent and business.

# Workforce Challenges

Here, as with many regions of the United States, there are jobs for which there are not enough qualified applicants. A prominent message from the Federal Reserve identified the common challenge of "creating a system with the capacity to help larger numbers of people develop technical skills, funding and providing access to higher education."

In late 2012 the Federal Reserve Bank of Kansas City held a conference to address the future of workforce development. Speakers and panelists examined the challenges employers encounter in finding skilled workers. What is needed is a pool of applicants and workers that are fluent in 21st Century technologies. A variety of speakers acknowledged the need to improve educational systems and "redesign curriculums that better match graduates to the job market."

Recent reporting by the *Tulsa World* indicated that many unemployed people are struggling to match skills to a changing employment market, "Likewise, employers can't find enough skilled workers to fill specific positions."

Employers also report few entry-level positions available and a need for skilled technicians. In 2012, the *World* sited nati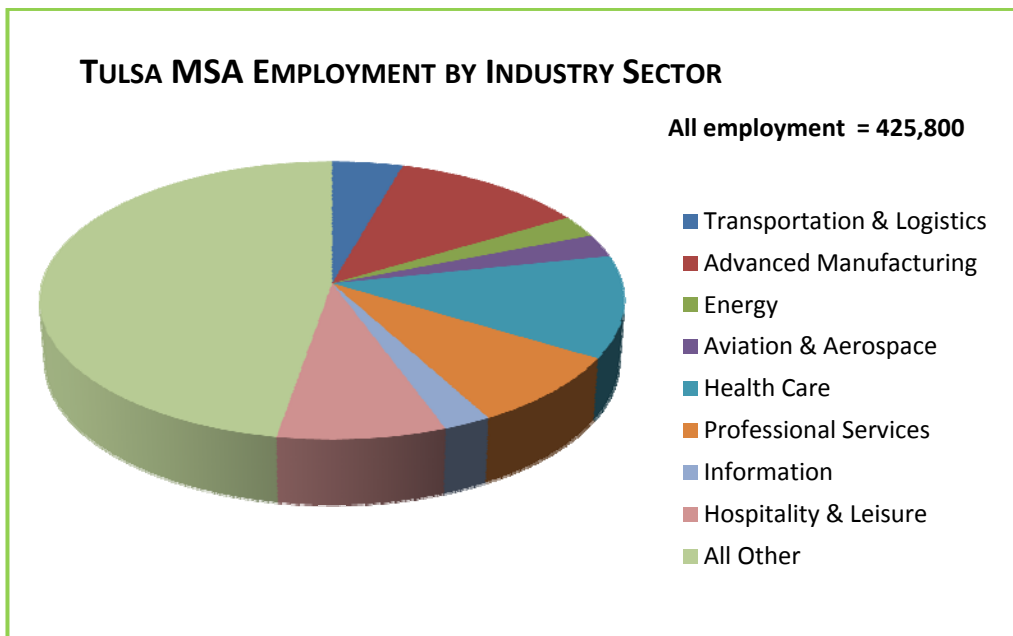onal Bureau of Labor Statistics figures demonstrating health care openings of 554,000 and manufacturing position openings of 285,000, the two sectors with the biggest demand.

Repeatedly, studies throughout the region concur that we have an aging workforce with an inadequately skilled population of workers in the pipeline leaving many employers unable to fill crucial positions both in the white and blue collar sectors. Moreover, there is a lingering ethnic disparity among various sectors of the working-age population. According to the American Community Survey, 3.1% of white residents above the age of 16 were unemployed in the Tulsa MSA in 2008. Yet, nearly 8% of black and 7% of American Indian residents were unemployed, and these figures are trending upward.

New opportunities need to be created for the unemployed such as increasing the skill level, transportation availability and partnerships with the private sector. Workforce Tulsa and the Tulsa Regional Chamber are consulting with the Council for Adult and Experiential Learning (CAEL) to commission an analysis of the existing workforce, employment sectors, and educational opportunities to develop a comprehensive strategy for the future that includes a spotlight on the underserved populations.

Positive news for the region, according to CAEL is, "Workforce readiness will remain and advance as the top competitive requirement for existing and future employers and should be a top factor in the selection of target industries by economic and workforce organizations. In Tulsa, the intersection of these two elements, workforce development and economic development, represents a truly unique opportunity for the targeted communities to focus on local strengths and build new, emerging economic and employment opportunity based on the local assets, and those that can be drawn from throughout the region."

## TULSA MSA EMPLOYMENT BY INDUSTRY SECTOR

**All employment = 425,800**

- Transportation & Logistics
- Advanced Manufacturing
- Energy
- Aviation & Aerospace
- Health Care
- Professional Services
- Information
- Hospitality & Leisure
- All Other

Aerospace is expected to continue as a strong contributor to the national economy, a site and facility planning group, Area Development Online reports. While there is uncertainty surrounding the future of American Airlines in Tulsa, "Over 90% of US exporters of aerospace products are small and medium-sized firms…component providers," which may sustain and expand production opportunities within the existing supply chain resulting in potential hiring in the region. It is estimated this industry employs more than 30,000 throughout the region.

A 2012 report from CareerCast.com, which is based on factual analysis and data indicates, "The common factor among Oklahoma's 10 best jobs is that they all have a high level of education." Petroleum Engineers earn an average salary of $114,148. Other top-rated jobs in the state include software engineer, human resources manager, civil engineer and physician. To our benefit, the oil and energy industry is fueling an increase of manufacturing jobs as well.

The Oklahoma Health Care Workforce Center and Oklahoma Hospital Association released a report in 2009 **projecting shortages** for Oklahoma health care workers by 2012 as follows: 3,000 nurses, 500 lab technicians, 400 physical therapists, 300 surgical technologists, and 200 occupational therapists. Needs were also quantified for radiology and respiratory professionals as well as pharmacists, all of which creates additional challenges and opportunities.

*Hospital Staffing Assessment 2008*

| Position | NE Region | NW Region | OKC Region | SE Region | SW Region | TUL Region | Statewide[1] |
|---|---|---|---|---|---|---|---|
| LPN Vacancies | 58 | 23 | 76 | 55 | 43 | 41 | 297 |
| LPN Vacancy Rate | 15.7% | 18.3% | 15.6% | 8.0% | 12.7% | 7.4% | 11.6% |
| RN Vacancies | 140 | 65 | 432 | 89 | 117 | 473 | 1,315 |
| RN Vacancy Rate | 10.1% | 15.6% | 8.1% | 7.5% | 18.1% | 13.2% | 10.5% |
| Total LPN/RN Vacancies | 192 | 72 | 508 | 137 | 150 | 514 | 1,573 |
| Total LPN/RN Vacancy Rate | 12.4% | 20.2% | 8.8% | 7.5% | 16.1% | 12.4% | 10.7% |
|  |  |  |  |  |  |  |  |
| Pharmacists Vacancies | 3 | 0 | 8 | 8 | 1 | 5 | 24 |
| Pharmacists Vacancy Rates | 4.3% | 0.0% | 3.9% | 11.0% | 3.3% | 4.2% | 4.8% |
|  |  |  |  |  |  |  |  |
| Respiratory Therapists Vacancies | 10 | 4 | 30 | 12 | 1 | 32 | 88 |
| Respiratory Therapists Vacancy Rates | 10.3% | 9.5% | 8.0% | 11.9% | 2.0% | 14.9% | 10.1% |
|  |  |  |  |  |  |  |  |
| Lab & Medical Techs Vacancies | 14 | 3 | 27 | 14 | 13 | 16 | 86 |
| Lab & Medical Techs Vacancy Rates | 10.5% | 5.1% | 11.9% | 7.3% | 18.1% | 5.1% | 8.7% |
|  |  |  |  |  |  |  |  |
| Imaging Vacancies | 15 | 5 | 27 | 5 | 6 | 28 | 86 |
| Imaging Vacancy Rates | 6.1% | 5.7% | 4.7% | 2.7% | 5.0% | 5.4% | 4.9% |
|  |  |  |  |  |  |  |  |
| Occupational Therapists Vacancies | 5 | 0 | 12 | 2 | 1 | 4 | 24 |
| Occupational Therapists Vacancy Rates | 27.0% | 0.0% | 9.9% | 17.9% | 6.0% | 9.1% | 11.3% |
|  |  |  |  |  |  |  |  |
| Physical Therapists Vacancies | 12 | 4 | 27 | 6 | 3 | 16 | 67 |
| Physical Therapists Vacancy Rates | 18.0% | 17.4% | 13.6% | 16.7% | 8.7% | 15.0% | 14.7% |
|  |  |  |  |  |  |  |  |
| Scrub Techs Vacancies | 10 | 3 | 14 | 13 | 4 | 12 | 56 |
| Scrub Techs Vacancy Rates | 13.5% | 8.7% | 4.0% | 13.6% | 6.0% | 6.3% | 6.9% |
|  |  |  |  |  |  |  |  |
| ALL EMTs Vacancies | 25 | 0 | 13 | 7 | 19 | 5 | 69 |
| ALL EMTs Vacancy Rates | 24.2% | 0.0% | 6.9% | 7.8% | 39.2% | 17.8% | 14.8% |
|  |  |  |  |  |  |  |  |
| Mental Health Vacancies | 15 | 3 | 32 | 4 | 3 | 23 | 79 |
| Mental Health Vacancy Rates | 10.6% | 9.4% | 6.8% | 14.8% | 25.0% | 11.8% | 9.1% |

# CEDS Committee Economic Development Area of Focus & Needs:

- OSU-Tulsa: Supercomputer partnership, expansion of medical training classes, research in advanced materials and bio-med;
- Drumright & Central Tech: Workforce challenges in filling skilled positions;
- Tulsa Community College: Development of partnerships; improved transportation systems; enhancing K-12; attracting and retaining faculty through quality of life issues;
- Bristow: Expand Bristow airport and increase its capacity;
- Tulsa: Grow and sustain manufacturing sector, increase base, support growth of aerospace industry;
- Collinsville: Importance of airport/aerospace related jobs to the area and need to retain;
- Sand Springs: Riverfront development, The American statue, Gilcrease expressway, Keystone Ancient Forest trails and visitor's center and Keystone corridor redevelopment;
- Broken Arrow: Seek incentives and property for expansion of clean energy facilities and manufacturing, funding for infrastructure, workforce challenges;
- Tulsa Regional Chamber of Commerce: Workforce;
- Bixby: Bridge in south Tulsa for improved access;
- Owasso: Importance of retail sector, need for quality jobs, improve rail access to Cherokee Industrial Park;
- Tulsa Co: Road improvements underfunded, increase property values in order to better fund schools, libraries, health department, etc.
- OU-Tulsa: Build on existing strengths such as aerospace and energy sectors, focus R&D on unique areas of opportunity such as health information technology and neurosciences (brain functions), increase graduates in engineering, nursing, pharmacy;
- University of Tulsa: CNG, cyber security, defense, tourism, need to drastically improve the state of Health (#48) and Education (#49) for the state in order to attract and retain quality workers and businesses;
- Sapulpa: Business retention and improved networking;
- Jenks: Riverfront and Tourism Development, continue to establish new points of destination to strengthen extended visits.

# Strategies for Success - Region Partners

Representatives serving on the CEDS committee introduced several initiatives their respective organizations have implemented to address and improve upon the challenges of a 21st Century workforce:

- **Tulsa Community College** is conducting outreach to adults to promote degree completion. In addition, they offer college-level teachers within area high schools. A biotechnology program was launched in 2006, and addresses fields such as medicine and agriculture; state-of-the-art laboratories enhance the learning experience. TCC is also working to support improved transportation systems; enhancing K-12; attracting and retaining faculty through quality of life issues.

- **Oklahoma State University-Tulsa** efforts include the OSU College of Medicine working with common education partners to identify and encourage rural students to prepare for medical school. The medical school is growing the size of student enrollment to address the shortage of primary care physicians in Oklahoma. Tulsa is also the home of the Helmerich Research Center, focusing on economic development in areas such as advanced technologies and materials, and the new laboratory facilities for forensic sciences at the OSU Center for Health Sciences.

- **University of Oklahoma-Tulsa** efforts include, build on existing strengths such as aerospace and energy sectors, focused research and development on unique areas of opportunity such as health information technology and neurosciences (brain functions), and to increase graduates in engineering, nursing, and pharmacy.

- **University of Tulsa** is home to a top 50 business school and energy management program; and is also known for research programs in support of national defense. TU helps support the Laureate Institute for Brain Research and partners with OU in developing physician assistant programs. The school of law includes a focus on Native American law.

- **Workforce Tulsa** has developed and implemented a career pathways program beginning with the kindergarten level, and beyond. Services provided include assistance in recruitment and retention of a quality workforce. They now offer statistical research and resources to the region through Economic Modeling Specialists International.

# Barriers and Opportunities

In developing the district strategic plan, we must consider many worldwide external factors that influence and threaten the political, market, and socioeconomic issues of our state and region.  Following the financial upheaval and subsequent recession of 2008, there remain persistent challenges.  Among them are the European debt crisis, trade imbalance, energy domination by and dependence on unstable regions, weather-related disasters on a global scale, human rights, conflict, disease, and poverty.  Even with these challenges opportunities can be identified, not only for large corporations but also small businesses, and entrepreneurs.

The CEDS committee, made up of a cross-section of local business, organization, tribal and education representatives, prepared a list of the Strengths-Weaknesses-Opportunities-Threats (SWOT) associated with successful economic development efforts and outcomes for the region, including the state.  The purpose of the exercise was to clarify and consider pursuit of the most effective, efficient, and forward-thinking goals, strategies and actions for the INCOG Economic Development District.

**Important and positive traits frequently mentioned on which to capitalize are Entrepreneurship support, strong Philanthropy and Volunteership endeavors, Cultural amenities, and a Family friendly quality of life in the Tulsa region.**

## SWOT: District-Region-State

### STRENGTHS

**Natural resources** – land, water, grasslands, agriculture
**Central** geographic location
**Manufacturing** industry
**Pro-business** climate, low cost of doing business
**Port** of Catoosa
**Aerospace and energy** sectors
**Low cost** of living
**Quality** of workforce/employees
**Governmental** collaboration
**Tribal** cultures
Increasing and civically active
**Young Professionals**
**Health and wellness** services
**Post-secondary** education and training institutions

### WEAKNESSES

**State Parks** – poor condition
**Limited** public transportation
Few **non-stop flights**
**Workforce** pipeline/skills
**No closing** fund
**Insufficient capital**
**Aging** water/sewer/roads/ infrastructure
Companies reluctant to hire **ex-offenders**
**Municipal funding** system & excessive tax-exempt property
Inconsistent **Leadership**
**Aging** workforce
**Poor health** outcomes (#49)
**K-12** inadequate funding & poor outcomes (#48)

### THREATS

**Online sales**
**Low-ranking**, reputation, image
**Social issues**
**Competition** with other states/regions
**Air quality** problems emerging
Lack of **local incentives**
**Negative** media

### OPPORTUNITIES

**Communication** technology
**Tourism** & film industry
**Wide open** spaces, room for growth
**Regional** cooperation
**Private** industry partnerships
**Leadership** working with legislature
**Convention** & visitor venues

Municipal funding is identified as a weakness, and often described as a serious challenge for Oklahoma cities and towns.  This issue was the primary topic of the Oklahoma Academy in 2010.  Our system is reliant largely on local sales tax revenues to fund operations.  These mechanisms are embedded in the state constitution; therefore, any change to the prohibition of property tax for municipal operational funds would require an amendment to the Oklahoma constitution.



The Academy, as well as other entities, have studied the issue thoroughly and suggest strategies to pursue be only those that are attainable through less extreme measures.  Analysis of the revenues and expenses from various perspectives indicate several options that would increase and diversify the sources of funds available to the state municipalities.  Recommendations include:
- Reduce the number of approved sales tax exemptions;
- Secure sales taxes on internet transactions;
- Distribute a portion of state sales tax funds to cities;
- Request increased ad valorem funds for cities' investment in infrastructure and services resulting in new development or redevelopment.

This topic, including background information, can be found at the Academy website:

http://www.okacademy.org/PDFs/issue-brief-web.pdf

# Strategy & Components

The 21st Century economy exhibits a new horizon for our region to attain.    Abundant resources and a rich history serve as a foundation for citizens and businesses that are culturally innovative.  These qualities are similar to those of the newly emerging Silicon Prairie, as described in a recent article by the *New York Times*, "From Des Moines to Omaha to Kansas City – a region known more for its barns than its bandwidth…state governments are teaming up with private organizations to promote the growing tech community."  It is possible northeastern Oklahoma could become represented in this group as well.  The INCOG region is ripe with opportunity as well as outstanding examples of long-term success stories of existing businesses.

No region can remain competitive without a focused commitment to education and a skilled workforce.  We are in constant competition with cities such as Denver, Austin, Ft. Worth, St. Louis, Albuquerque, and Little Rock.  As with many other regions and states, we recognize and support improvement to the Science, Technology, Engineering, and Math disciplines throughout the system.  And, as with all the major industry clusters, from logistics to services, from retail to tourism, diverse knowledge and strong skills are required.



A clean environment has rapidly become a desired trademark of a vibrant region. Green technologies are budding from the expansion of digital technology in the 1990s and 2000s embraced by citizens, businesses, and governments.  Our position recognizes that choices for new and existing businesses and residents require future-oriented activity, including diverse, alternative transportation.

Economic Development should not be seen as an exercise in picking winners for a future economy.  Derived from discussions, research and identifying the prominent features of the region, the CEDS lays out a path for economic growth shared by all industry sectors.  As such, the five **District Goals** seek to synchronize these components in establishing economic development strategies.  Underpinning the **Goals** of the plan, are specific areas of focus, which were the most relevant and important to  the CEDS committee.  These issues are to be addressed within the **Goals** as important to successful economic development for the region:

1. Healthcare
2. Transportation
3. Education
4. Strategic community development
5. Regional connections
6. Workforce
7. Infrastructure
8. Environment
9. Quality of life
10. Municipal funding

## *District Goals:*

I. ***Ensuring a healthy, attractive and sustainable environment, vibrant, thriving communities and a high quality of life for all the region's residents.***
   Healthcare
   Environment
   Quality of Life
   Public Funding

II. ***Fostering a regional business climate that supports high quality private investment and job creation.***
   Regional Connections
   Strategic Community Development

III. ***Ensuring residents have better access to living wage jobs and employers have access to world class talent.***
   Education
   Workforce

IV. ***Harness and capitalize on the entrepreneurship and technology innovation assets in the region.***
   Education
   Strategic Community Development

V. ***Advancing the region's transportation infrastructure to meet the demands of a globally connected modern economy.***
   Infrastructure
   Transportation

*Nature Conservancy's Tallgrass Prairie, Pawhuska, Osage County, Oklahoma*

## GOAL ONE: *Ensuring a healthy, sustainable environment, vibrant, thriving communities and a high quality of life.*

Visitors come to Oklahoma – one of the most biologically diverse areas in North America – to experience the state's ecoregions. Parks, water, prairies and forests contribute to the character and personality of the region. Residents of the Tulsa area appreciate the trails, bike, and pedestrian paths, which can also serve as low cost transportation alternatives. The CEDS team supports continued investment in our **sense of place**. Recent research suggests that access to a clean environment and outdoor amenities encourages physical activity that leads to direct health benefits. In addition, trees and shrubs provide critical filtration thereby improving local air quality. Northeast Oklahoma is aptly called **Green Country**, and is a strength that is promoted frequently.

Not only local governments but schools and universities are taking an active role in **neighborhood redevelopment** throughout the area. Investment in facilities is strengthened by strategic initiatives in their

vicinity, such as the University of Tulsa, which provided more than 42,000 hours of service to the community in 2012 through True Blue Neighbors. The Pawhuska Business Development Center is a partnership between the Osage County Industrial Authority, Osage County, City of Pawhuska, the Osage Nation and Tri County Technology Center. TCTC manages the day to day operations of the incubator and provides training for businesses and educational opportunities for the surrounding area.

The State of Oklahoma, local governments, universities and businesses are taking the lead in developing alternative energy technologies and **adopting sustainable practices**. Our partners are implementing policies such as reduction of energy use in buildings and facilities, expansion of walking and biking trails, recycling and the conversion of waste to fuel, identifying and protecting natural and historic features, to name a few.

The INCOG Economic Development District partners continue to support opportunities for collaboration and overcome competition for scarce resources.

Strategies

I.1 Healthcare:
– Improve overall health and related statistics through integration of health care providers, education and cutting-edge technology.
– Expand rural health care access.
– Develop education and provision of health care workforce.

I.2 Environment:
– Protect the region's natural environment and cultural amenities as economic assets.
– Expand, maintain, and enhance an interconnected system of parks, trails and open spaces.
– Foster environmentally-friendly businesses and sustainable enterprises.

I.3 Quality of Life:
– Continue to make the region more attractive to the young professional workforce.
– Increase awareness and understanding of all ethnic cultures that live, work or visit in the region.

- Support the development of affordable, vibrant, and safe communities for all residents.

I.4  <u>Public Funding</u>

- Request increased ad valorem funds for cities' investment in infrastructure and services resulting in new development or redevelopment.
- Reduce the number of approved sales tax exemptions.
- Distribute a portion of state sales tax funds to cities.

## GOAL TWO: *Fostering a regional business climate that supports high quality private investment and job creation.*

The greater region encompasses northeastern Oklahoma and represents a **diverse array of business and industry**. Although we did not avoid the global recession beginning in 2008, its effects were less severe than in many areas of the US. In fact, Tulsa ranked as the 7$^{th}$ **strongest metro economy** in the U.S., according to Business Week and was named a top 10 metro by 13 publications in 2009. In 2011, we were named 7$^{th}$ of the **best cities** for young adults.

Our regional partners strive to retain all businesses and help them grow. Understanding and integrating the positive traits of existing business practices, market forces, access to capital, research, and public policy can **enhance the climate** for greater investment and job creation. A number of studies over the past several years identified the target industry clusters throughout our region as well as seeds of opportunity. As clusters thrive, educational systems and new businesses respond to these industries resulting in a positive economic cycle of activity and investment. We continue to emphasize and support the existing clusters and pursue additional industry groups that exhibit capacity for high-growth.

An important component of our success is the recognition that cities, counties, schools, economic development organizations and regional initiatives can work proactively to further bond the citizens, enterprises and leaders together in fostering a positive business climate.

Strategies
- II.1 <u>Regional Connections</u>
    - Develop and implement cluster specific strategies to grow quality employment and investment opportunities in the identified clusters.
    - Continue to enact a marketing/public relations campaign to promote the region's business advantages, including national media placement efforts.
    - Assist in the potential development of Tulsa International Airport, multi-modal facility and industrial areas.
- II.2 <u>Strategic Community Development</u>
    - Support policy and resource development at the local, state and federal levels, such as legislation, regional initiatives, and grants, including US Department of Agriculture Rural Development programs.



- Assemble sites that are under public ownership where appropriate so they can be developed by private business and industry that meet regional goals and/or quality jobs.
- Expand access to traditional and venture capital for business investment across all communities within the District; explore creation of a Community Development Corporation and/or Revolving Loan Fund.

## GOAL THREE: *Ensuring residents have better access to living wage jobs and employers have access to world class talent.*

Effective educational and workforce systems are the key ingredient to achieving this goal. As a whole the region has many valuable programs, which need to be sustained, expanded, and leveraged. However, common education, K-12, throughout the area "needs improvement." District member organizations continue to advocate and **support local and state efforts** for additional funding as well as improved effectiveness. Over the past 15 years the region has experienced significant growth in the presence of public universities, which has added to the highly-rated private universities located here. High school graduates have many educational options. Specialization and advanced degrees are available in a wide variety of fields. In addition, Tulsa Community College, Tulsa Technology Center, and smaller private institutions, offer classes and associates degrees in a range of subjects, are relatively affordable, and recognized for their high quality.
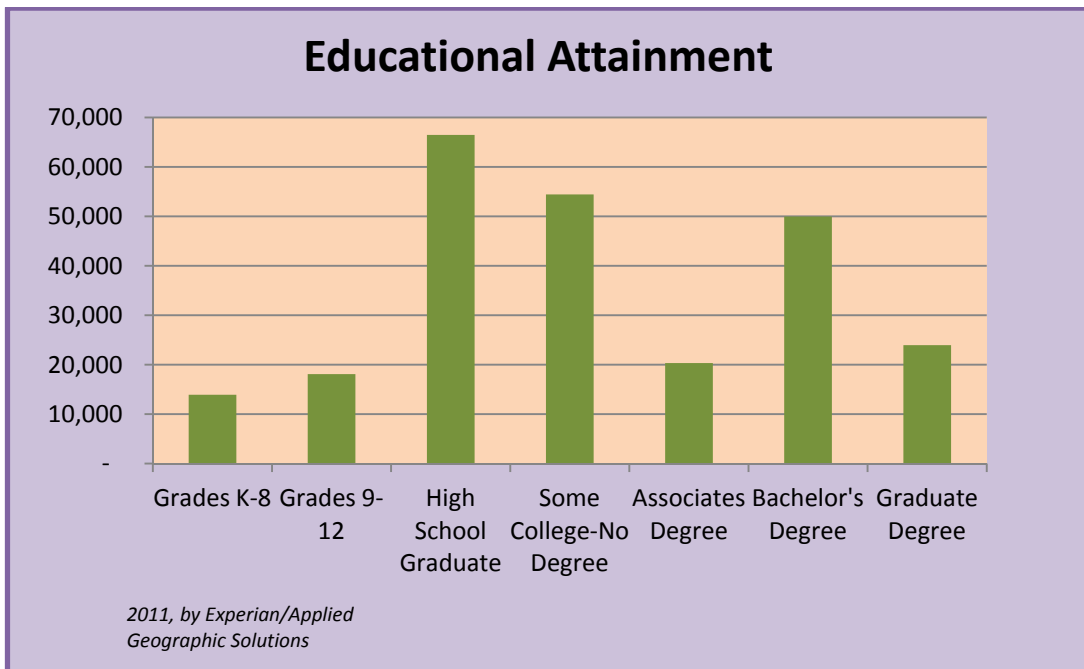
Northeast Oklahoma is known for its skilled workforce, yet the 21st Century presents new challenges and opportunities for employers and employees. A high school diploma is essential but insufficient to ensure a good job. Skill expectations in Oklahoma's key industries are increasing. Employers are looking for **workers who bring substantial knowledge and abilities** to their work.

### Around the EDA Region

The **Louisiana Business and Technology Center**, **E. J. Ourso College of Business**, **LSU** and the U.S. Department of Agriculture have partnered in a unique, innovative project for Louisiana. The LBTC mobile classroom, dubbed the "Driving Louisiana's Economy" initiative, is a custom-designed 18-wheeler trailer retrofitted to house seminars and workshops for small business owners. The self-contained mobile classroom has state-of-the-art audio/visual capabilities, including a large plasma screen monitor, broadband wireless Internet connectivity, and seats up to 24 people for seminars.

The mobile classroom is scheduled to visit 37 rural parishes as it tours Louisiana to present various programs including leadership development seminars, small business workshops on a variety of topics, women and minority business forums, entrepreneurship training, business planning and marketing workshops, access to capital workshops, and Small Business Innovation Research grant seminars. In light of the devastating impact of Hurricanes Katrina and Rita, the mobile classroom will pay special attention to the business recovery and development needs in Louisiana's hurricane-impacted areas.

## Educational Attainment

**Chart: Educational Attainment** (values in thousands)

| Category | Approximate Value |
|---|---|
| Grades K-8 | ~13,000 |
| Grades 9-12 | ~18,000 |
| High School Graduate | ~66,000 |
| Some College-No Degree | ~54,000 |
| Associates Degree | ~20,000 |
| Bachelor's Degree | ~50,000 |
| Graduate Degree | ~24,000 |

*2011, by Experian/Applied Geographic Solutions*

Strategies

III.1 Education

− Analyze the economic impact of education as an industry cluster as a tool for information, advocacy and support.

− Prepare a regional inventory of educational programs that serve the needs of target industries and competencies.

− Strengthen college and university participation in economic development to allow improved, deliberate response by educators to changes in industry training needs.

III.2 Workforce

− Increase regional opportunities for credential attainment.

− Link the region's workforce skills and strengths with education assets to the needs of high-growth and emerging industries.

− Expand availability of apprenticeship programs that serve high-growth industry needs and connect diverse areas of the region, urban, suburban, and rural.

**GOAL FOUR:** *Harness and capitalize on the entrepreneurship and technology innovation assets in the region.*

Many **remarkable projects** have taken off over the past several years that capitalize on both entrepreneurship and technology.  i2E (Innovation to Enterprise) founded in 1997, was created to respond to an Oklahoma Center for the Advancement of Science and Technology initiative.  With offices in Oklahoma City and Tulsa, i2E has assisted hundreds of entrepreneurs, companies, inventors, and researchers in turning their technological innovations into high growth business opportunities for Oklahoma.  i2E also accesses a venture capital fund for some of their clients.   The Forge, under the auspices of Tulsa Young Professionals, created a business development center and incubator to allow young entrepreneurs to set up shop in a low-cost, supportive environment, in order to attract and retain creative and innovative people and provide a support network.  This effort was funded in part by EDA.

Newly developed, near the University of Tulsa, is the Hardesty Center for Fab Lab, a non-profit entity that has collaborated with the Massachusetts Institute of Technology to assemble a diverse collection of state-of-the-art equipment and computers into one workspace as a **community center for innovation**, entrepreneurship, and STEM education. Fab Lab empowers the community to

*www.fablabtulsa.com*

make their ideas a reality, provding low-cost use of equipment for educational, artistic or commercial products.  Oklahoma Innovation Institute was awarded an EDA matching grant to establish the region's first Supercomputer.  It is housed in downtown Tulsa, a collaboration among four local colleges and universities, and is expected to be completed and open in 1Q 2013.

Recently, the Tulsa metropolitan area was listed as 24th on a list with the **most technolgy-employment growth in 2010 and 2011**. Specifically, the region was estimated to have had a 7.6% increase in high-tech jobs versus 2.6% for the nation as a whole.  Accordingly, it has been reported that more risk capital is becoming available to allow that sector to continue growth.



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Strategies
    IV.1 Education
    – Expand development of university-linked technology research park, including a testing facility for post-doctoral and graduate students and private-sector research.
    – Support biomedical training and research for middle, high school and post secondary students.
    – Explore creation of a regional internship program that leverages the existing network to increase opportunities.
    IV.2 Strategic Community Development
    – Collaborate with non-profits that provide assistance to entrepreneurs and innovators through regional incubation facilities, trainings, and support services.
    – Identify resources to expand revolving loan funds and technical assistance for small and micro business start ups.
    – Promote programs to convert unused buildings or main street retail spaces into small co-working space for entrepreneurs.

**GOAL FIVE:** *Advancing the region's transportation infrastructure to meet the demands of a globally connected modern economy.*
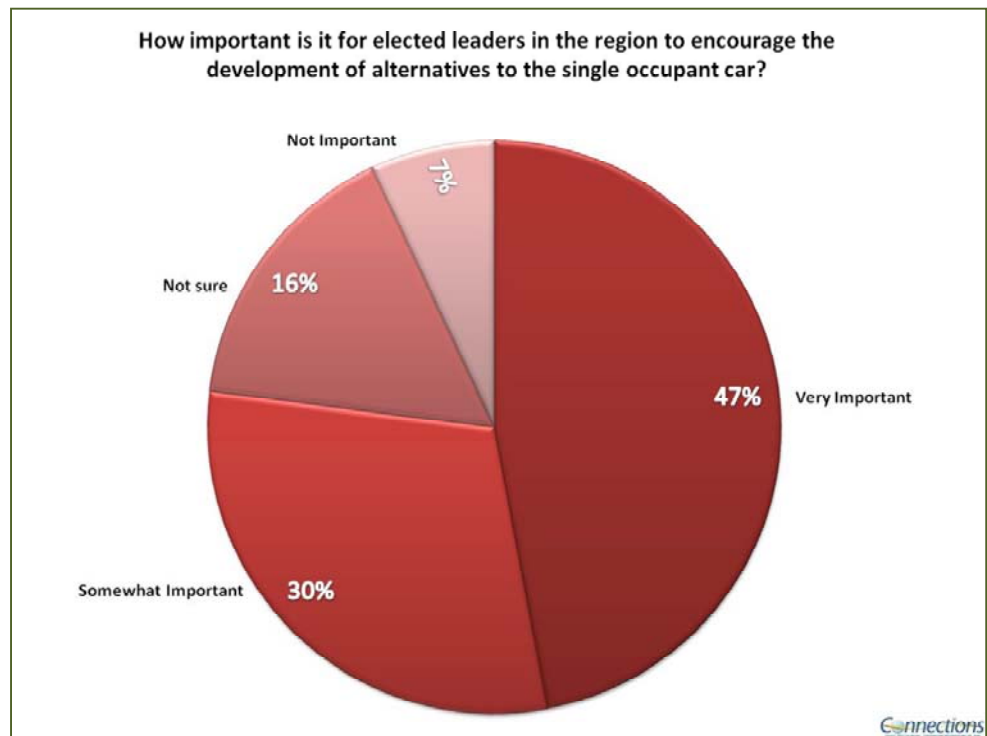
Transportation policies primarily address the public infrastructure of streets, alleys, bikeways, sidewalks and transit services.  The Tulsa region benefits from a **central location** geographically.  Many transportation assets, highways, international airport, rail, and a one of the largest inland river-ports in the US provide important connectivity for the area.  The Port of Catoosa features a 2,000-acre industrial park and manages more than 2.2 million tons of cargo annually.  Tulsa International Airport continues to expand non-stop flights by various carriers and recently completed significant improvements to its terminal facilities.  Tulsa also has an excellent network of **recreational trails** comprised of more than 100 miles throughout the region.  INCOG currently manages the Clean Cities Program and promotes Compressed Natural Gas vehicles including expanded access to stations to provide a better environment, increased national energy security, reduced dependence on imported oil, more economic opportunities, and the protection of public health.

In 2010, the area received a $50 million federal grant toward funding a $78 million replacement of the failing I-244 Arkansas River Bridge.  New structures will also accommodate passenger rail, commuter rail, and dedicated bicycle/pedestrian amenities.   Widening and reconstruction of an important highway, I-44, through Tulsa is nearing completion of the multi-year, $360 million project.

The area transportation facilities have resulted in a generally uncongested road network.  However, public input processes for the past several years have found significant support for **expanding the range** of transportation options.  In addition, federal transportation priorities have changed to consider awarding funds for projects that enhance walking, biking, and transit infrastructure in an effort to improve livability.  Among its updated principles are, "Valuing the unique qualities of all communities – whether urban, suburban, or rural."  Regionally, Tulsa 2030 envisions shifting travel demand to a variety of modes, which could reduce the need to expand road capacity.



According to a 2007 Report by the Urban Land Institute, "Sound infrastructure forms the backbone that is critical to maintaining and enhancing regional economic growth, competitiveness, productivity and quality of life.  For businesses, infrastructure has the greatest influence on location, availability of an educated workforce, and low crime."

How important is it for elected leaders in the region to encourage the development of alternatives to the single occupant car?

Not Important 7%
Not sure 16%
Very Important 47%
Somewhat Important 30%

Connections

*2035 Regional Transportation Plan*

Infrastructure is more than transportation alone; the region also needs an **information technology network** that can meet the demands of a growing innovation economy.  Many rural areas need significant improvements and access to 21$^{st}$ Century technology.  Supporting entrepreneurship, new technologies, education, and research require expansion of the region's information systems to provide greater opportunities.

Finally, for decades numerous studies have detailed the issues and remedies regarding the Arkansas River corridor in technical insufficiencies as well as **potential economic development** and recreational improvements.  While many amenities, existing and future, should remain as voter-approved initiatives, some environmental issues may require federal and state review and investments.
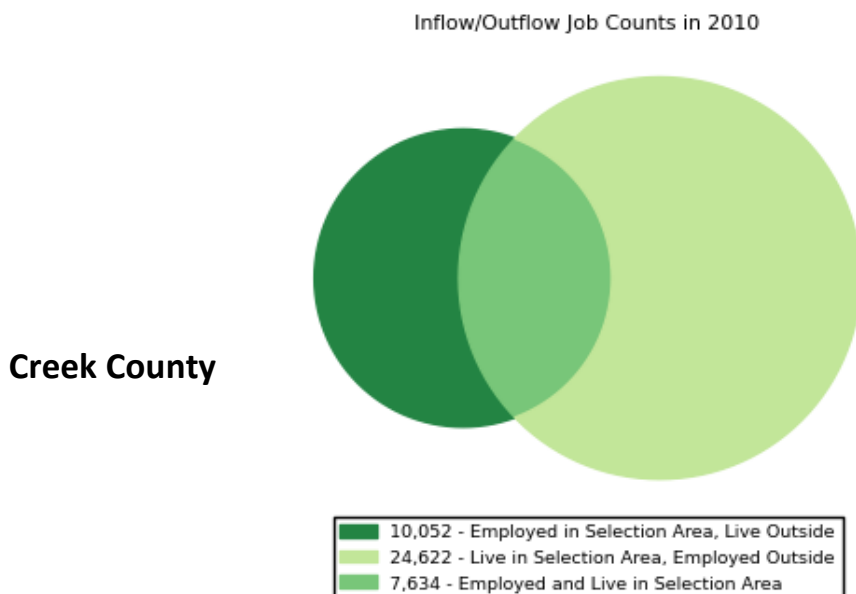
Strategies
    V.1 Infrastructure
     &minus; Support regional infrastructure investments that enhance economic growth and development opportunities and will

- bolster mobility between communities and commercial districts.
- Assist regional partners in obtaining state and federal resources needed to expand information technology infrastructure in suburban and rural communities that enhance economic growth.
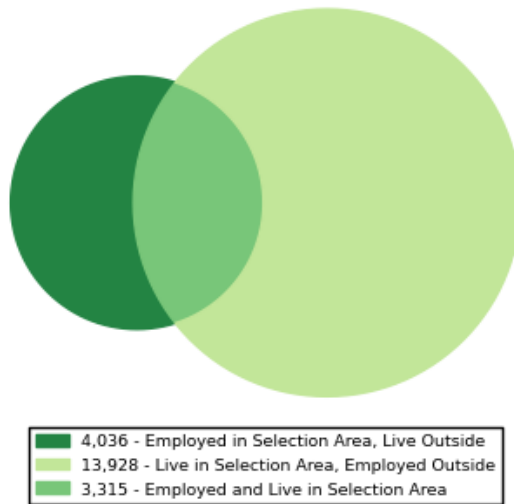- Identify resources to address the need to repair existing levees along the Arkansas River.

V.2 Transportation

- Assist in promoting an urban circulator system with public transit connecting the corridors between the Arkansas River to downtown, and nearby colleges and universities.
- Support the Regional Transit System Plan recommendation for creation of a *Regional Transit Authority*, including, identify and establish interim steps of governance mechanism.
- Work with adjacent cities and counties to improve the transportation system that is plan-driven, user-friendly and sustainable.

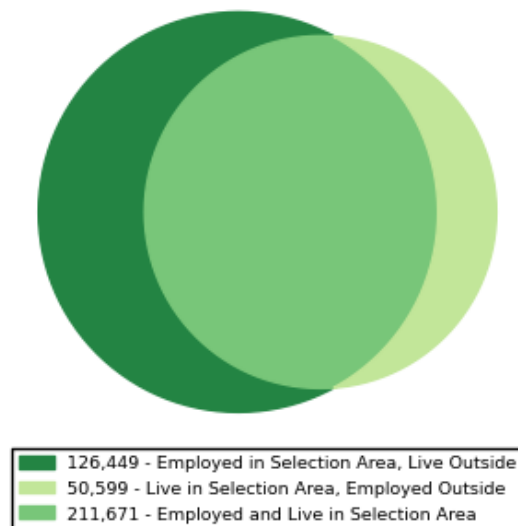**COMMUTER PATTERNS - INCOG ECONOMIC DEVELOPMENT DISTRICT:**

Inflow/Outflow Job Counts in 2010



**Creek County**

| | |
|---|---|
| ■ | 10,052 - Employed in Selection Area, Live Outside |
| ■ | 24,622 - Live in Selection Area, Employed Outside |
| ■ | 7,634 - Employed and Live in Selection Area |

Inflow/Outflow Job Counts in 2010



- 4,036 - Employed in Selection Area, Live Outside
- 13,928 - Live in Selection Area, Employed Outside
- 3,315 - Employed and Live in Selection Area

**Osage County**

Inflow/Outflow Job Counts in 2010



- 126,449 - Employed in Selection Area, Live Outside
- 50,599 - Live in Selection Area, Employed Outside
- 211,671 - Employed and Live in Selection Area

**Tulsa County**

INCOG is designated under federal law as the regional planning organization for the **Tulsa Transportation Management Area** and the **Metropolitan Planning Organization**.  The agency distributes about $13 million annually to transportation projects and provides regional data for planning.  To the extent possible, the EDD will support and assist the regional partners in implementation of recommended transportation goals.

# EDA Mission & Investments

*"To lead the federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy."*

The U.S. Economic Development Administration's investment policy is designed to establish a foundation for sustainable job growth and the building of durable regional economies throughout the United States. This foundation builds upon two key economic drivers - *innovation and regional collaboration.* Innovation is key to global competitiveness, new and better jobs, a resilient economy, and the attainment of national economic goals. Regional collaboration is essential for economic recovery because regions are the centers of competition in the new global economy and those that work together to leverage resources and use their strengths to overcome weaknesses will fare better than those that do not. EDA encourages its partners around the country to develop initiatives that advance new ideas and creative approaches to address rapidly evolving economic conditions.

## *Investment Priorities*

Within the parameters of a competitive grant process, all projects are evaluated to determine if they advance global competitiveness, create jobs, leverage public and private resources, can demonstrate *readiness and ability to use funds quickly and effectively,* and link to specific and measureable outcomes. To facilitate evaluation, EDA has established the following investment priorities:

1. **Collaborative Regional Innovation**
   Initiatives that support the development and growth of innovation clusters based on existing regional competitive strengths. Initiatives must engage stakeholders; facilitate

collaboration among urban, suburban, and rural (including tribal) areas; provide stability for economic development through long-term intergovernmental and  collaboration; and support the growth of existing and emerging industries.

2. **Partnerships**
Investments that use both public- and private-sector resources and leverage complementary investments by other government/public entities and/or nonprofits.

3. **National Strategic Priorities**
Initiatives that encourage job growth and business expansion related to advanced manufacturing; information technology (e.g., broadband, smart grid) infrastructure; communities severely impacted by automotive industry restructuring; urban waters; natural disaster mitigation and resiliency; access to capital for small, medium-sized, and ethnically diverse enterprises; and innovations in science and health care.

4. **Global Competitiveness**
Initiatives that support high-growth businesses and innovation-based entrepreneurs to expand and compete in global markets, especially investments that expand U.S. exports, encourage foreign direct investment, and promote the repatriation of jobs back to the U.S.

5. **Environmentally-Sustainable Development**
Investments that promote job creation and economic prosperity through projects that enhance environmental quality and develop and implement green products, processes, places, and buildings as part of the green economy. This includes support for energy-efficient green technologies. See Apendix #2.

6. **Economically Distressed and Underserved Communities**
Investments that strengthen diverse communities that have suffered disproportionate economic job losses and/or are rebuilding to become more competitive in the global economy.

The INCOG Economic Development District has been successful in securing EDA funds under the categories **of technical assistance, public works infrastructure, and disaster resiliency**. New programs introduced over the past few years include program opportunities through collaboration with other agencies.



EDA was instrumental over the past year in the continued implementation of the **challenge grant programs** that are an important part of President Obama's push to create an economy that is "built to last." In partnership with several other federal agencies, in 2012 EDA awarded $9 million to 13 winners of the Rural Jobs and Innovation Accelerator Challenge, $7 million to the seven winners of the 2012 i6 Challenge, $1 million each to three winners of the second Strong Cities, Strong Communities (SC2) Challenge, and $6.5 million to 10 winners of the Advanced Manufacturing Jobs and Innovation Accelerator Challenge.

> ***Opportunities for these grants for the INCOG region will be potentially available during the next fiscal and calendar year contingent upon Congressional funding.*** Potential projects must meet specific program criteria as well as the EDA's Investment Priorities as listed above in addition to leveraging other funding sources.
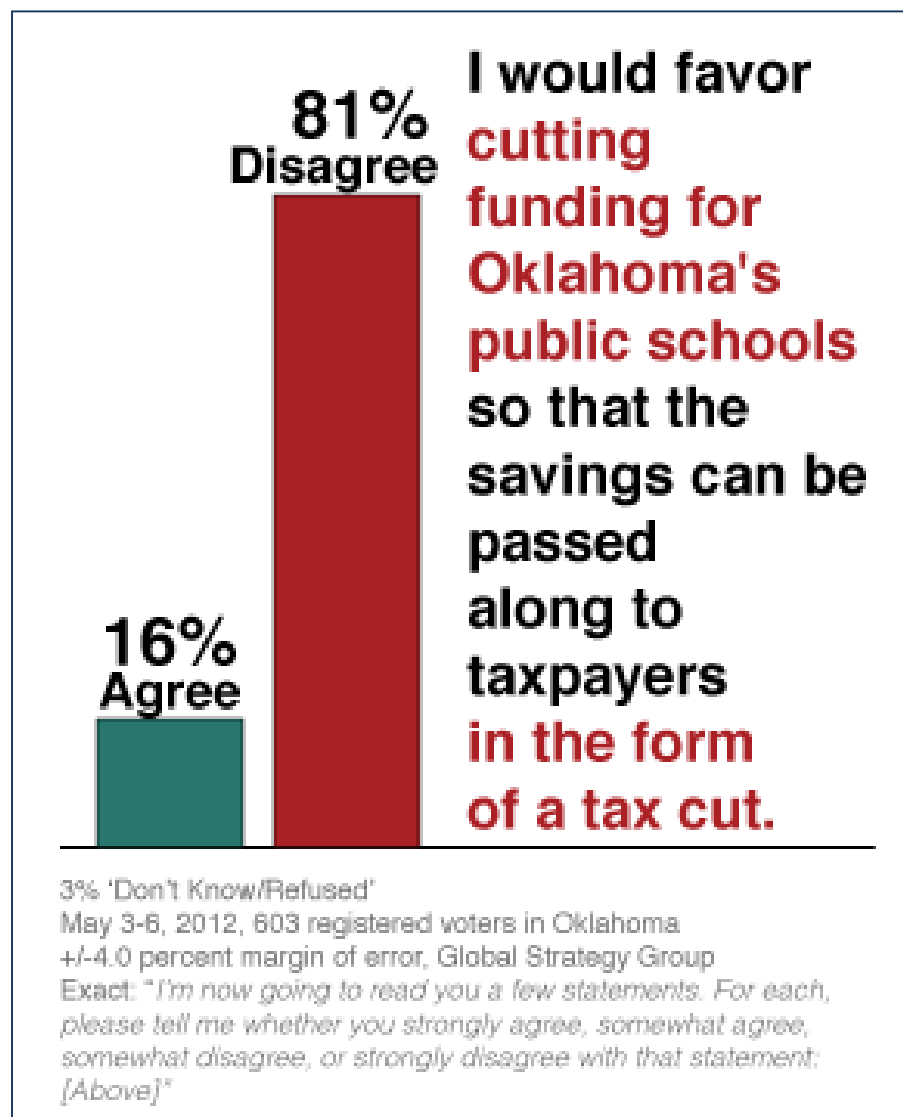
# NEWS & POLICY UPDATES

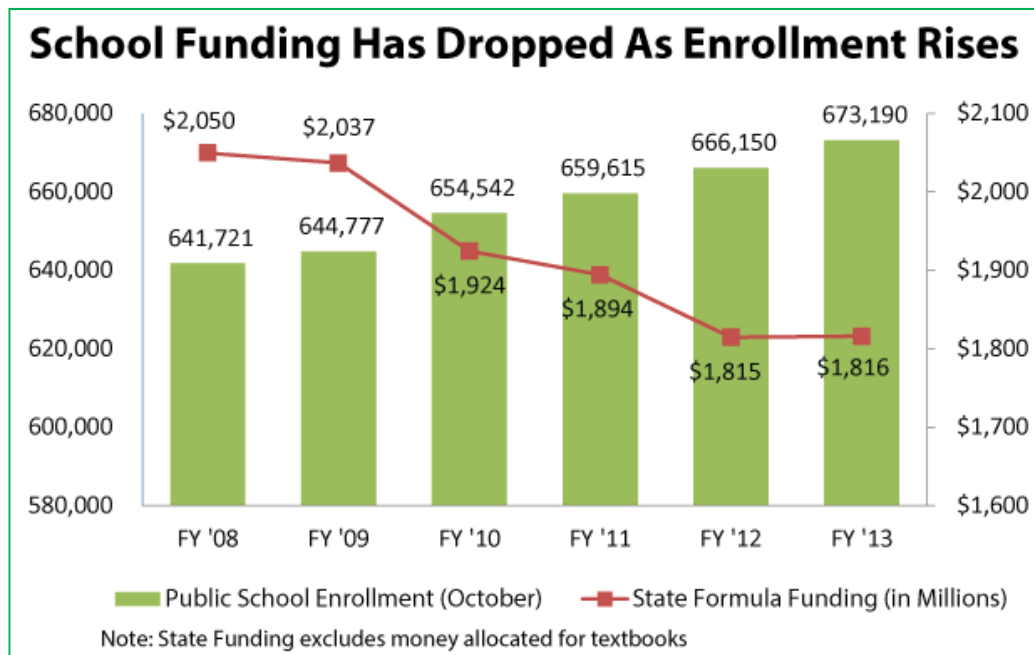## Number of the Day – Oklahoma Policy Institute – 2/21/2013

**1,850**

The number of jobs created by new businesses in Oklahoma in 2012, compared to 11,320 jobs added by existing businesses

Source: Oklahoma Department of Commerce

**81% Disagree**

**16% Agree**

I would favor cutting funding for Oklahoma's public schools so that the savings can be passed along to taxpayers in the form of a tax cut.

3% 'Don't Know/Refused'
May 3-6, 2012, 603 registered voters in Oklahoma
+/-4.0 percent margin of error, Global Strategy Group
Exact: "I'm now going to read you a few statements. For each, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with that statement: [Above]"

**Oklahoma: Funding Public Schools FY08-FY12**

## School Funding Has Dropped As Enrollment Rises

A bar and line chart showing Public School Enrollment (October) as green bars and State Formula Funding (in Millions) as a red line, across fiscal years FY '08 through FY '13.

Left axis (enrollment): 580,000 to 680,000. Right axis (funding): $1,600 to $2,100.

Enrollment values:
- FY '08: 641,721
- FY '09: 644,777
- FY '10: 654,542
- FY '11: 659,615
- FY '12: 666,150
- FY '13: 673,190

State Formula Funding values:
- FY '08: $2,050
- FY '09: $2,037
- FY '10: $1,924
- FY '11: $1,894
- FY '12: $1,815
- FY '13: $1,816

Legend: Public School Enrollment (October) — State Formula Funding (in Millions)

Note: State Funding excludes money allocated for textbooks

*Source: Oklahoma Policy Institute*

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***From the Tulsa World, February 26, 2013***

Warren Buffett's BH Media Group is buying the Tulsa World for an undisclosed price. World Publishing Co. Chairman Robert E. Lorton announced the sale in a meeting with newspaper employees Monday morning.

According to the World, "…we believe - and have decided - this is the best path to the future," Lorton said.

JPMorgan Chase ([JPM](#)) kicked off this year's annual investor day on Tuesday, with plans to reduce headcount and expenses in 2013. The bank says it expects to eliminate 4,000 positions and cut costs by $1 billion over the course of the year. - See more at:

Even with the job cuts, JPMorgan will still be plenty big. The firm's head count fell modestly in 2012 to 258,000 employees. That's up from just over 180,000 five years ago. - See more at:

http://finance.fortune.cnn.com/2013/02/26/jpmorgan-jobs-cuts/?iid=HP_LN#sthash.jWpBdt9s.dpuf

The increase in wages for community college grads is being driven by a high demand for people with so-called "middle-skills" that often require no more than an associate's degree, such as lab technicians, teachers in early childhood programs, computer engineers, draftsmen, radiation therapists, paralegals, and machinists.

With a two-year community college degree, air traffic controllers can make $113,547, radiation therapists $76,627, dental hygienists $70,408, nuclear medicine technologists $69,638, nuclear technicians $68,037, registered nurses $65,853, and fashion designers $63,170, CareerBuilder.com reported in January.

- See more at:

http://money.cnn.com/2013/02/26/pf/college/community-college-earnings/index.html?iid=HP_LN#sthash.HzZDcDrJ.dpuf

# Tulsa Regional Chamber Legislative News

**Workers' Compensation Reform Legislation Unveiled by Senate Leaders**

Senate leaders unveiled legislation Monday that would reform Oklahoma's workers' compensation system and move the state from a judicial-based system to an administrative system. SB 1062 was heard in the Senate Judiciary Committee Tuesday and passed out of committee with a strong 8-2 vote. ***The Senate passed the bill on February 27, 2013, and now heads to the House.***

State leaders continue to increase their commitment to reducing workers' compensation costs, noting that Oklahoma's premium costs are among the highest in the nation and put the state at a significant competitive disadvantage regionally when trying to attract and retain jobs.

Workers' compensation reform is a key OneVoice priority and stands as one of the top legislative priorities on the 2013 OneVoice Legislative Agenda. The Tulsa Regional Chamber is committed to passing reforms that will lower the cost of doing business in Oklahoma, and will be working on reform efforts with legislative leaders throughout session.

*OneVoice 2013 workers' compensation statement: Support workers' compensation reforms which will provide an efficient, cost effective system that lowers costs and increases benefits, while providing quality healthcare to injured workers and ensuring a timely return to work. Such reforms will help lower workers' compensation rates, reducing the cost of doing business in Oklahoma and leading to the creation and retention of vital jobs.*

## Oklahoma filmmaker urges change to Native American students: college and career

With a backpack slung over his shoulder, Sterlin Harjo easily blended in with the crowd of high school students. Perhaps that was his intent, knowing his talk with several hundred students would be about his past and their future.



Harjo was the keynote speaker at this year's Native American Career Fair for Tulsa Public Schools high school students. Tulsa Community College's West Campus hosted the event where students got a look at future college and career opportunities. For Harjo, who often focuses his talks on the Native American student, the message was about change.

"Find something that could change your life," Harjo said. This Oklahoma filmmaker and screenwriter told the students not to be their own worst enemy and not let self-doubt bring them down. He said, "You can do a lot, you don't realize it. Go for whatever you want to do and have the courage."

For Shawnee Moses, her plan is to work with children and change their young lives. The Rogers High School junior wants to major in child psychology and attend Columbia University in New York. Kimani Williams, a Webster High School senior, admits she might change her mind, "I want to go into broadcast journalism but I want to expand my options and see if there is something else out there."

Open-minded is how Devyn Wickson, a Webster High School junior, described himself. He was using the career fair to research possible options. "I have some ideas about what I want to do in the future as a career but I also want a second choice and to learn about what is needed," Wickson said.

The Native American Career Fair highlighted college and career options including TCC's Tulsa Achieves and the Native American Studies (NAS)

program, an interdisciplinary program at TCC's West Campus emphasizing indigenous perspectives, focusing on the traditions and experiences of people who have shaped our state and nation. The event allowed students to start or continue the conversation about what comes after high school. Harjo hopes that conversation is just the beginning for these high school students headed to college and a future career that could change their lives.

- See more at:  http://www.tulsacc.edu/articles/february/21/2013/oklahoma-filmmaker-urges-change-native-american-students-college-and-caree#sthash.2DYKhvlS.dpuf

## Tulsa corporate expansion puts metro area high on list

By LAURIE WINSLOW World Staff Writer

Published: 3/5/2013  2:25 AM

Last Modified: 3/5/2013  8:18 AM

For the second year in a row, Tulsa ranked No. 2 among its class of metro areas for the number of new and expanded corporate facilities, according to Site Selection magazine.

The Tulsa area recorded 41 facility projects in 2012. Among metros with a population of 200,000 to 1 million, Tulsa was topped only by Dayton, Ohio, which had 53 facility projects last year, according to the magazine.

In 2011, Tulsa and Dayton tied at No. 2 with 34 facility projects each.

The magazine breaks metros into tiers based on their population size, including those with populations of more than 1 million, those with populations between 50,000 to 200,000, as well as "micropolitans," which are cities of 10,000 to 50,000.

Among Tier 1 metros with a population of more than 1 million, Houston-Baytown-Sugar Land once again landed the No. 1 spot with 325 new and expanded facilities in 2012, up from 195 facilities in 2011.

Some of the projects that factored into Tulsa's 2012 project count included Baker Hughes Inc. in Claremore; Team Oil Tools LP, AT&T Inc. and capSpire Inc. in Tulsa; and AG Equipment Co. and CSI Aerospace in Broken Arrow, according to the magazine's editor-in-chief, Mark Arend.

Read more from this Tulsa World article at http://www.tulsaworld.com/business/article.aspx?subjectid=49&articleid=20130305_46_E1_Forthe981884

# From the NY Times:

## Oklahoma: Art Deco Style, Music and More in Tulsa

*By THE ASSOCIATED PRESS*

*Published: March 5, 2013 at 11:08 AM ET*

TULSA, Oklahoma (AP) — As an Oklahoma transplant — a native New Englander who moved here for love — I've had fun getting to know the Sooner State. I also host the occasional out-of-town visitor, so I'm always on the hunt for colorful history, interesting art, quirky shopping and a great meal. I have found it all, plus some surprises, in Oklahoma's second-largest city: Tulsa.



Tulsa was initially occupied by Native American tribes forced to relocate here from their home territories by the Indian Removal Act of 1830. But the modern city was built from oil money in the early 20th century. There was already a railroad station here serving the cattle industry when oil was discovered in nearby Red Fork in 1901, so Tulsa became the logical place for oilmen — from tycoons to middlemen to so-called wildcatters looking for the next big well— to settle with their families.

What you find here now is an eclectic mix of new and old: artsy hangouts that show off Tulsa's thriving hipster culture as well as well-preserved historic gems that harken back to the oil boom of the early 1900s. As somebody who seeks out both highbrow art and underground subculture, I love this about Tulsa.

DOWNTOWN ARCHITECTURE

At first glance, downtown Tulsa can seem quiet and a little rugged at the edges. But if you know where to go and you practice the art of looking up at the buildings instead of down at your feet, you'll find a great display of art deco architecture and other turn-of-the-century styles.

Tulsa was a "young city ... experiencing unprecedented growth and prosperity in the Roaring Twenties, just as the Art Deco movement came into vogue," according to the Tulsa Preservation Commission's website. "Flush with oil money, prominent Tulsans started building the skyscrapers that would spur one of the pre-eminent Art Deco collections in the United States."

The most striking example of Tulsa's art deco treasures might be the Boston Avenue Methodist Church, 1301 S. Boston Ave. You can't miss its 258-foot (79-meter) tower, holding court at the city's southeastern edge. Somehow the building, erected in 1929, manages to look like a church and a skyscraper all at once.

Straight down Boston Avenue from the church sits another beauty: the Philtower Building, 427 S. Boston Ave., which was commissioned by prominent oilman Waite Phillips and opened in 1928. Look for the gargoyles above the Boston Avenue entrance, and look way up to see the colorful tiled roof, a splash of strange, almost lovably outdated hues that floats above the city as a relic of the past.

Also worth a look are the Atlas Life Building, 415 S. Boston Ave.; the Mayo Hotel (where you can book a room or grab a gourmet meal), 115 W. Fifth St.; and the Philcade building, 509 S. Boston Ave. The building facades are only the beginning: On a weekday afternoon, it's fun to wander into the lobbies for stunning views of ceilings and chandeliers.

For more information, visit http://www.tulsapreservationcommission.org .

IN SEARCH OF FINE ART

In addition to its architectural gems, Tulsa boasts two wonderful major art museums.

Ten minutes northwest from downtown, Gilcrease Museum, 1400 N. Gilcrease Museum Road, houses an expansive collection of art from the American West (the largest worldwide, they say) and an array of Native American artifacts such as glass-beaded moccasins, feather headdresses and leather clothing.

Grown out of the private collection of Tulsa oilman Thomas Gilcrease, the museum is now home to more than 10,000 paintings, prints and sculptures from prominent American artists such as Frederic Remington and Thomas Moran.

Meanwhile, 10 minutes south of downtown, the Philbrook Museum of Art, 2727 S. Rockford Road, houses an equally magnificent collection in what was once the 72-room private villa of Waite Phillips' family. Perhaps even more impressive than the fine artwork displayed at this renowned Tulsa attraction is the sprawling 23-acre (9-hectare) garden behind the museum. I attended a wedding last summer that embodied the romantic European spirit of this Italian-style estate.

SHOPPING, MUSIC AND FOOD

The shopping in Tulsa, like everything else, can be fancy or casual, depending on your whim. I always like to browse through the luxury home-goods store T.A. Lorton, 1343 E. 15th St., on a bustling street known locally as Cherry Street. It's quite expensive, but you are guaranteed to find items you've never seen before, from indulgent children's gifts to high-end linens to unique lamps, tables and dinnerware.

For a store with lower prices and an edgier flair, I recommend Dwelling Spaces, 119 S. Detroit Ave., in the Blue Dome District. The neighborhood, named after the blue-painted dome of an old gas station that originally served motorists on historic Route 66, is a small but bustling corner of downtown that attracts artists and others with a bohemian bent.

Dwelling Spaces sells quirky handmade items such as T-shirts, decorative pillows and posters that tend to feature offbeat Oklahoma- and Tulsa-centric designs. It's where you can buy all your Flaming Lips merchandise (the world-famous rock band started in Oklahoma) and the latest copy of the popular bimonthly broadsheet magazine, "This Land Press." Read it over a freshly brewed cup of Joe at the coffee bar.

My favorite casual spot for eating is El Rio Verde, 38 N. Trenton Ave., an authentic Mexican restaurant in the otherwise unassuming region northeast of downtown. Like many good hole-in-the-walls, this place seems a bit shady from the outside. But step inside and order a wet burrito (served with sauce on top) and a glass of horchata (a traditional rice drink) and you won't care where you are.

For higher-end fare, I've been twice blown away by the new but amazing Juniper Restaurant and Martini Lounge downtown, 324 E. Third St. Chef Justin Thompson is getting a lot of buzz for his local-focused, seasonal menus featuring items such as bison burgers and pork belly eggs benedict. I like the sweet carrot soup and roasted vegetable and goat cheese sandwich. And, while I've never had a Juniper cocktail myself, who wouldn't be intrigued by concoctions using house-made green tea and lemon vodka and roasted peanut bourbon?

For a great non-alcoholic pick-me-up, try the Coffee House on Cherry Street (1502 E. 15th St.). A community oasis for artists and musicians, full of mismatched furniture and a constant stream of regular customers, the cafe makes all its own baked goods, including gluten-free and vegan items that look just as enticing as their bad-for-you counterparts. I never leave Tulsa without a slice of peanut butter pie from CHOCS (as the locals call it).

Tulsa is home to a great music scene as well. The historic Cain's Ballroom, built in 1924 and known as the regular performing venue of Bob Wills, the "King of Western Swing," now draws a steady stream of big acts across all genres, 423 N. Main St., or http://bradytheater.com/. The Brady Theater, likewise, has been around since the early 1900s — 105 W. Brady St., http://bradytheater.com/ — and continues to draw the hottest performers.

## Oklahoma's economic growth slowing, reports show

State Treasurer Ken Miller says Oklahoma's economic growth is at a more subdued pace.

NewsOK
By Michael McNutt | Published: March 4, 2013

Oklahoma's economy is continuing to grow but at a more subdued pace, state Treasurer Ken Miller said Monday.

"Our average growth rate between March 2011 and February 2012 topped 10 percent," Miller said. "For the past 12 months, growth has averaged 2 percent."

February gross collections were down by 2.4 percent, or almost $20 million, from February of last year, he said. Oklahoma's two biggest sources of revenue, income tax and sales tax, both grew; income tax grew by 1.4 percent and sales tax by 3.9 percent.

Gross production, motor vehicle taxes and other sources were all reported as lower than the same month a year ago, Miller said.

Total revenue collections are considered a reflection of the performance of the state's economy.

# Agriculture: Productivity in Oklahoma?

*Martha Gregory, Research Wizard, Tulsa City-County Library System*
***Producing More and Doing It Better***
***Measuring Agricultural Productivity***

Oklahoma as an agriculture state makes a
substantial investment of money, materials and
manpower into that sector of its economy. For this reason we need to
know how well we are doing.  Simple measures such as how much
wheat we grow and how many head of cattle we raise do not tell all.

The USDA Economic Research Service (ERS)
has a better way. Its productivity model measures output relative to
inputs. The result is
a productivity index that offsets production by
the amount of investment for a truer picture of
how efficient the nation and each of the states are at providing our food
supply. An acre of wheat that requires excessive amounts of labor, land
and material may be operating at a loss, regardless of how much is
harvested.

Inputs are adjusted for changes in quality such as improvements in
chemicals and seeds, changes in farm labor demographics, and
innovations in agricultural equipment and methods. The result is
agricultural productivity that is driven by innovation and improvements
and backed by research, education, and solid infrastructure.

From the period 1948 to 2009, growth in the nation's farm sector output
was due almost entirely to productivity growth measured by how well
we use the resources we have. The level of U.S. farm output in 2009
was 170 percent above its level in 1948, growing at an average annual
rate of 1.63 percent, while aggregate input use increased a mere 0.11
percent annually. Globally, productivity growth accounts for a rising
share of the increase in true agricultural production and an easing of
pressure on natural resources in order to supply the growing demand
for food and agricultural commodities.

The table below shows productivity index growth for each of the states over the span of years from 1960-2004. Oklahoma's low ranking is due to consistently high inputs relative to how much it produced over those 40-plus years. Our productivity index has not kept up with the rest of the country. While variable weather extremes are a factor in our poor score, the data may suggest room for improvement in the key areas that support productivity growth – education, research, innovation and infrastructure.

According to the ERS, agriculture is more dependent on improvements in technology as a source of growth than are other sectors in the U.S. economy. This means that we must give at least as much attention to our investment and innovation in farming as we direct toward our other industries.

| | | | | |
|---|---|---|---|---|
| 1 Oregon | 2.58 | | 25 California | 1.66 |
| 2 Rhode Island | 2.48 | | 26 Vermont | 1.62 |
| 3 Michigan | 2.41 | | 27 Missouri | 1.62 |
| 4 Massachusetts | 2.29 | | 28 South Carolina | 1.61 |
| 5 Indiana | 2.28 | | 29 Kentucky | 1.61 |
| 6 Connecticut | 2.20 | | 30 Nebraska | 1.60 |
| 7 Ohio | 2.16 | | 31 Wisconsin | 1.59 |
| 8 Idaho | 2.01 | | 32 Utah | 1.55 |
| 9 New Hampshire | 2.00 | | 33 Arizona | 1.53 |
| 10 Mississippi | 1.98 | | 34 Virginia | 1.53 |
| 11 Illinois | 1.96 | | 35 South Dakota | 1.51 |
| 12 Arkansas | 1.93 | | 36 New York | 1.48 |
| 13 Louisiana | 1.93 | | 37 New Mexico | 1.44 |
| 14 Georgia | 1.91 | | 38 Florida | 1.44 |
| 15 Maine | 1.90 | | 39 Montana | 1.38 |
| 16 North Dakota | 1.90 | | 40 Alabama | 1.32 |
| 17 Iowa | 1.87 | | 41 West Virginia | 1.29 |
| 18 Minnesota | 1.86 | | 42 Nevada | 1.24 |
| 19 North Carolina | 1.84 | | 43 Texas | 1.14 |
| 20 Maryland | 1.83 | | 44 Tennessee | 1.13 |
| 21 Pennsylvania | 1.81 | | 45 Colorado | 1.10 |
| 22 Delaware | 1.80 | | 46 Kansas | 1.05 |
| 23 Washington | 1.73 | | 47 Wyoming | .66 |
| 24 New Jersey | 1.67 | | **48 OKLAHOMA** | **.58** |

## Forge business incubator welcomes new tenants

The Forge, a business incubator located in downtown Tulsa and operated by Tulsa's Young Professionals, recently welcomed a new tenant company, Medefy. The start-up tech firm enables companies and individuals to see the cost and quality of medical procedures up front so patients can make informed medical decisions. Medefy is one of five companies that are participating in the i2e Business Development Immersion Program.

## Tulsa Regional Chamber offers recruitment resources

The Tulsa Regional Chamber connects local employers to services and programs to grow, retain and attract skilled and professional workers. To assist in those efforts, the Chamber has created a "Choose Tulsa" relocation guide, which is filled with resources and helpful information. The guide includes data and background on the Tulsa region and top industries as well as information about the quality of life in northeast Oklahoma and links to numerous websites and organizations. The guide is available [online here](online here).

# INCOG Economic Development District 2013 CEDS

## Appendix

1. Tulsa & Oklahoma City Statistical Areas over time
2. EDA Green Growth Overview
3. Arkansas River Project Completion Report 2011
4. i2E Completion Report 2012
5. Oklahoma Innovation Institute white paper
6. OSU-Tulsa Helmerich Research Center information
7. Regional Transit policies excerpt
8. Arts Economic Impact, Tulsa

# Tulsa and Oklahoma City Metropolitan Statistical Areas Over Time

| Year | Oklahoma City MSA Population | Rank | Tulsa MSA Population | Rank | Areas included in the metropolitan statistical area at the time |
|---|---|---|---|---|---|
| 1970 | 641,000 | 50 | 477,000 | 68 | OKC - Canadian, Cleveland, Oklahoma Counties / Tulsa - Creek, Osage, Tulsa Counties |
| 1980 | 834,000 | 46 | 689,000 | 56 | OKC - Canadian, Cleveland, McClain, Oklahoma, Pottowatomie Counties / Tulsa - Creek, Osage, Mayes, Rogers, Tulsa, Wagoner Counties |
| 1990 | 959,000 | 42 | 709,000 | 56 | OKC - Canadian, Cleveland, Logan, McClain, Oklahoma, Pottowatomie Counties / Tulsa - Creek, Osage, Rogers, Tulsa, Wagoner Counties |
| 2000 | 1,083,000 | 42 | 803,000 | 58 | OKC - Canadian, Cleveland, Logan, McClain, Oklahoma, Pottowatomie Counties / Tulsa - Creek, Osage, Rogers, Tulsa, Wagoner Counties |
| 2010 | 1,252,987 | 42 | 937,478 | 55 | OKC - Canadian, Cleveland, Grady, Lincoln, Logan, McClain, Oklahoma Counties / Tulsa - Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, Wagoner Counties |
| 2012 | 1,296,565 | 42 | 951,880 | 55 | OKC - Canadian, Cleveland, Grady, Lincoln, Logan, McClain, Oklahoma Counties / Tulsa - Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, Wagoner Counties |

## Combined Statistical Areas

| Year | Oklahoma City CBSA Population | Tulsa CBSA Population |
|---|---|---|
| 2003* | 1,200,000 | 928,967 |
| 2010 | 1,327,576 | 1,109,295 |
| 2011 | 1,346,038 | 1,115,407 |
| 2012 | 1,367,325 | 1,122,259 |

*Tulsa CBSA - includes the counties of Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, Wagoner & Washington

Oklahoma City CBSA - includes the counties of Canadian, Cleveland, Grady, Lincoln, Logan, McClain, Oklahoma & Pottowatomie

Tulsa CBSA - includes the counties of Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, Wagoner, Washington, Muskogee & Cherokee

Source: US Bureau of the Census, OMB Metropolitan definition/delineations

## Overview

The Economic Development Administration (EDA) was established under the Public Works and Economic Development Act of 1965, as amended (42 U.S.C. § 3121 et seq.) (PWEDA), to lead the Federal economic development agenda. EDA makes investments in economically distressed communities in order to promote American innovation and accelerate long-term sustainable economic growth. The agency works to foster regional collaboration, to spur the strong public/private partnerships needed to attract private capital investment and create higher-skill, higher-wage jobs.

## EDA's Role in Environmental Sustainability

Investments in environmentally-sustainable economic development are essential to improving our Nation's competitiveness. EDA believes that green versions of its traditional grant-based investments are a key component to advancing and growing the economy. By encouraging environmentally-sustainable economic development, EDA helps to cultivate innovations that can fuel green growth in communities suffering from economic distress. Through investments in emerging regional clusters related to energy, cutting-edge environmental technologies, green building practices, and sustainable communities that connect jobs to workers through smart location choices, EDA is well-positioned to foster job creation by limiting the Nation's dependence on fossil fuels, enhancing energy efficiency, curbing greenhouse gas emissions, and protecting natural systems.

## Operationalizing Green Growth

EDA operationalizes its role in green growth through an investment priority (i.e., Environmentally Sustainable Development) that encourages the use of its programs to support environmentally-sustainable economic development. The Environmentally Sustainable Development investment priority promotes job creation and economic prosperity through projects that develop and implement green products, processes, places and buildings. While such projects enhance environmental quality, the environmental benefits are ancillary to the projects' economic development and job creation impacts.

EDA, through the Environmentally Sustainable Development investment priority, seeks to support green projects (e.g., renewable energy, energy efficiency and reuse/recycling/restoration/preservation) economic development projects that will result in one or more of the following:

- **Development or manufacture of a green end-product (Green End-Product)**. Investments that produce an end-product that furthers or contributes to sustainability in general or the environmental quality of the associated community or region. The end-product (what is being developed or produced) can take numerous forms, such as

an activity, item, plan or program.  For example, a Green End-Product might be a business incubator focused on renewable energy, infrastructure for a business park in which the primary tenant will produce solar panel components, or a feasibility study for developing a biomass-to-electricity facility.

- **Greening of an existing function or process (Green Process)**.  Investments that result in green enhancements such as improvements to the resource, energy, water, and/or waste efficiency of an existing function or process.  The enhancements reflect changes to the life-cycle process of an existing function so that the function is performed in a more sustainable manner.  The focus is on how the product is being developed or produced rather than the product itself.  For example, a Green Process might be the expansion of a tannery facility to allow for training programs in tannery operations which use water and energy in a more sustainable manner.  The project would potentially impact multiple stages (e.g., use and reuse) of the associated training process life-cycle.

- **Creation of, or renovation to, a green building (Green Building)**.  Investments that result in the construction or renovation of a structure using green building techniques that result in a net positive outcome in terms of energy, materials, and/or water use efficiency.  Such buildings or structures must pursue and receive U.S. Green Building Council Leadership in Energy and Environmental Design (LEED™) certification (or other comparable green building certification).  The focus is on the green aspects of the building or structure itself, not what is being created, developed or undertaken within.  For example, a Green Building might be a LEED-certified agribusiness commercialization center.

- **Support or enhance a green place or location (Green Place)**.  Investments located within mixed-use, transit-oriented areas that increase community revitalization, improve job assess and protect rural lands and landscapes or other undeveloped or environmentally sensitive lands (e.g., greenfields or wetlands).  The green portion of these investments is not what is being created, developed or undertaken, but where (from a land-use perspective) the project activity is taking place.  Such investments are:
    - located within a ½ mile of quality transit (i.e., fixed guide way transit station or well-served bus transit stop) for urban or inner-suburban locations, or within a ½ mile of  town center or main street area for rural locations; AND
    - situated on previously developed or degraded land – includes infill and vacant property development, intensification of underutilized parcels, and/or the leveraging of existing public infrastructure;

    -OR-

    - sited within the boundaries of an area that has received the US Department of Housing and Urban Development's  Preferred Sustainability Status designation (for more information: http://portal.hud.gov/hudportal/HUD?mode=disppage&id=OSHC_PREF_SUST

[STATUS_PG](#)) and can demonstrate how the project is consistent with the Partnership for Sustainable Communities Livability Principles (i.e., provide more transportation choices; promote equitable, affordable housing; enhance economic competitiveness; support existing communities; coordinate policies and leverage investment, value communities and neighborhoods).  For more information on the Livability Principles, please see [http://www.sustainablecommunities.gov/aboutUs.html#2](http://www.sustainablecommunities.gov/aboutUs.html#2),

For example, a Green place might be the construction of a business incubator on a former brownfields site that is located within 3/10 of a mile of a light rail stop.

## Applying for EDA Funding

In order to successfully demonstrate that a project addresses the Environmentally Sustainable Development investment priority, an applicant must clearly explain in its application how the proposed project satisfies at least one (note that no additional credit will be received for addressing more than one) of the project outputs noted above – Green-End Product, Green Process, Green Building, or Green Place.

Questions regarding EDA's application procedures, including eligibility requirements, distress criteria, investment priorities, and application procedures should be referred to the EDA regional office that serves an applicant's State or region.  For more information, see PWEDA and EDA's regulations set out at 13 C.F.R. chapter III, both of which can be found on EDA's website. Regional office contact information may also be found on EDA's website.  Additional information may be found in the appropriate EDA Federal funding opportunity announcement which is posted at [www.grants.gov](http://www.grants.gov) and on EDA's website at [www.eda.gov](http://www.eda.gov).

**Arkansas River Project Completion Report, EDA Investment 08-79-04296**
**March 22, 2011**

This report is provided for the purpose of detailing the progress on Scope of Work outputs from the initial grant provided by EDA to INCOG and Tulsa County for the initial phase of preliminary design of the proposed Arkansas River Corridor projects. The Scope of Work outputs proposed in the initial grant were developed prior to a consultant selection process and the subsequent development and negotiation of the consultant Scope of Services. The consultant Scope of Services was developed to best meet the goals of the EDA grant, which was to prepare as much technical information as possible with the funding available to ultimately assemble a complete Section 404 permit application as required by the Clean Water Act and the U.S. Army Corps of Engineers'(USACE) regulations to implement the proposed projects. The consultant Scope of Services describes in detail each task and deliverable to be performed in this first phase of preliminary design. The consultant team of CH2M HILL was selected to perform this work and proposed a phased strategy and schedule to perform the studies and preliminary design work that would be needed for a complete Section 404 permit application.

The Scope of Work in the grant document presents a general outline containing 5 major study elements in the following order:
    A. Review existing information and materials
    B. Perform related studies
    C. Prepare Preliminary Designs of improvement requirements and alternatives
    D. Prepare Section 404 permit application and submit to the Corps of Engineers.
    E. Provide continued liaison with the Corps of Engineers and other pertinent resources agencies throughout the process of the 404 permit application.

Further definition was provided for item B, 'Perform related Studies':
    i. Sediment transport evaluation
    ii. Hydraulic and hydrology modeling and evaluation of proposed improvements and river system
    iii. Geotechnical investigations
    iv. Habitat restoration or improvement requirements and alternatives

As stated in Attachment A of the grant, this Scope of Work outline was prepared based on a draft RFQ (Request for Qualifications) that was to be released for the consultant selection process after the grant and local funding had been secured. The details of how to accomplish this Scope of Work, and how much could be accomplished within the funding limits of the grant and local match, would be determined and detailed during the development and negotiation of the consultant's Scope of Services. The goal in developing and negotiating the consultant Scope of Services was to maximize the available resources to accomplish the most work tasks that would be required and incorporated in a complete 404 permit application. Many diverse environmental and engineering studies will be required to obtain the required permits for the ultimate construction of these projects. The work accomplished under this first phase of

preliminary design has produced numerous Technical Memoranda (TM) addressing considerably more than the 5 studies listed under item B above. The following presents a list of the TMs that have been finished under this initial phase of preliminary design. They are listed under each major Scope of Work item A – E, as presented above:

A. Review existing information and materials
    1. *Arkansas River Corridor Projects Baseline Summary TM*
    2. *Preliminary Regulatory Review, Data Gaps Analysis, and Summary of Potential Project Effects*
    3. *Site Reconnaissance Summary TM*

B. Perform Related Studies:
    i. Sediment transport evaluation
        1. *Summary of Fluvial Geomorphic Issues and Identification of Data Gaps TM and Attachments*
        2. *Vegetation and Soils Assessment Summary TM*
        3. *River Bank Stabilization and Concept Design TM*

    ii. Hydraulic and Hydrology Modeling and evaluation of proposed improvements
        1. *Hydrologic & Hydraulic TM – (Modeling Evaluation)*
        2. *Hydrologic & Hydraulic TM – (Flow Duration and Frequency Evaluation)*
        3. *Floodplain Ordinances and Regulations TM*
        4. *Surveyed Outfalls Data TM and maps*
        5. *Survey Control Points Summary TM*

    iii. Geotechnical investigations
        1. *Existing Geotechnical Resource Review TM*
        2. *Preliminary Geotechnical Exploration TM*

    iv. Habitat restoration or improvement requirements and alternatives
        1. *Riparian Habitat Summary TM*
        2. *Least Tern Data Review and Analysis TM*
        3. *Fish Passage Data Review and Analysis TM*
        4. *Potential Water Quality Effects TM*

C. Prepare Preliminary Designs of Improvement requirements and alternatives
    1. *Concept Alternatives for Gates, Dam Spillway, whitewater and Roughened Channel Fish Passage TM*
    2. *Illustrative Concept Plans and Montages for the Arkansas River Corridor Project TM*
    3. *Preliminary Groundwater Review TM*
    4. *Overall Public Safety TM*
    5. *Conceptual Operational Control Scheme TM*

D.  Prepare Section 404 permit application and submit to the Corps of Engineers

    The Corps of Engineers will be the lead agency in preparing the Section 404 permit application and performing the environmental review and NEPA process that will lead to the issuance of a Section 404 permit for each or all of the projects to be constructed.  With pending Congressional appropriations for our WRDA2007 authorized project, the 404 Permit application form will be completed by Corps of Engineers staff or contractors when sufficient components of the necessary information and requisite studies have been completed to become a part of a complete 404 permit application.  In order to avoid any duplication of future Corps of Engineers efforts in this project, a limited evaluation of the regulatory process and potential data needs and gaps was undertaken.  The results of that work will be used to identify critical data needs and strategies to fill data gaps and are contained in the following TMs:
    1. *Preliminary Project Management Plan TM*
    2. *Preliminary Environmental Impact Statement Preparation Plan*

E.  Provide continued liaison with the Corps of Engineers and other pertinent resources agencies throughout the processing of the 404 permit application.

    For a major federally authorized project like this, the preparation and processing of the 404 permit application requires a significant amount of effort to inform and coordinate with interested local, state and federal resource agencies, as well as the general public, and to comply with federal requirements for public information and participation about project alternatives.  Numerous meetings were held with the consultant team and local sponsor representatives and local, state and federal agencies to inform, coordinate, and to solicit information, input and comments.  These meetings included representatives from the Corps of Engineers, US Fish and Wildlife Service, Ok. Department of Wildlife Conservation, ODEQ, State Archeologists, USGS, NRCS, City of Sand Springs, City of Tulsa, City of Jenks, INCOG, River Parks Authority, levee districts and many more.  Numerous public meetings were held to inform the public about project alternatives and progress and to obtain their input and comments.  A summary of these meetings is contained in the first report listed below.  Future public information and involvement efforts will be critical to project success.  A proposed strategy and plan to continue the agency and public information and input process is contained in the second report listed below.
    1. Agency Coordination and Public Involvement Report
    2. Public Outreach Plan

Summary:
With the completion of these activities and reports, the project has advanced significantly in addressing the regulatory requirements to prepare for the permitting process.  Many scientific and engineering studies will be required for a complete permit application and to comply with NEPA environmental review requirements.  The scope of this EDA grant

project was purposefully designed to perform several of these critical studies that are needed to better define project details and associated impacts.  Data and study gaps were identified that will be the focus of work to be performed in future study efforts, yet to be funded.  All work will be utilized in the project design and regulatory permitting process, and future duplication of efforts will be avoided due to the close coordination of the consultant team, local stakeholders, the USACE and other resource agencies.

## INCOG/i2E Tulsa Long-Term Industry Plan Project
# Final Report
### September 28, 2012

## Overview

In September of 2011, i2E began the design and implementation of a regional innovation strategy to provide targeted business growth and development services, business training programs and networking opportunities to early-stage companies and entrepreneurs within the Information Technology/Software industry in the Tulsa region. i2E also began design of a curriculum and development of an implementation plan for the proposed i2E Immersion Program for new entrepreneurs in the targeted industry cluster. The initiative focused on two strategies: *Building & Growing Human Capital* and *Building Entrepreneurial Capacity.*

During the first three months of the year-long Project, i2E focused primarily on hiring staff to implement the services outlined in the Scope of Work, planning and development of new services targeted to the IT/Software sector, researching and planning networking events, plus researching and designing the curricula for training workshops and Immersion Program. Building upon those activities, i2E then focused on networking opportunities with entrepreneurs and local corporate executives in the IT/Software industry. During the last quarter of FY2012, i2E continued its research and design work on the Immersion Program, continued networking activities for the industry, and focused on building sustainable relationships with the organizations representing the IT/Software industry in the region.

During the final two months of the initiative, i2E focused on delivering advisory services to its IT/Software clients, finalized the curriculum and established timelines for the implementation of the Immersion Program, and began crafting the final report on lessons learned from the year-long effort.

## Activities Summary

During the project year, i2E interacted with and provided services to 29 targeted companies. Of those companies, 10 are currently fee-paying clients of i2E. In addition, i2E sponsored six major networking/training events as summarized below:

**Networking Events**

- Discussion Forum among Tulsa's corporate IT leaders
- Held two IT client luncheons in i2E's Tulsa office
- Networking Session with i2E IT clients and Tulsa area's IT leaders in academia
- Co-Sponsor of the 2012 Tulsa Collaboratorium Entrepreneurship Summit and presented "Understanding Business and Financial Modeling"
- Networking Reception "Tech Night Out" targeting the Tulsa IT/Software industry and other entrepreneurs in the region

**Outreach**

i2E has agreed to provide support for the Tulsa Web Developers (WebDevs) group, the largest and most visible software developers group in Tulsa. i2E hosts WebDevs monthly meetings and will continue to support its "Hackathon" events 3-4 times per year.

i2E met with NORDAM's executive management to discuss potential synergies with i2E IT client base, outsourced R&D and NORDAM's IT and innovation priorities. i2E staff will continue to identify and build relationships with industry leaders in the region.

**Advisory Services & Leveraged Investment**

During the project year, i2E interacted with and provided services to 29 targeted companies in the Tulsa area. Services provided include market analysis, development of operational strategies, financial analysis, investment structuring plus participation in educational and networking sessions.

Five of the 29 companies touched by the Program raised approximately $2.1 million in equity funding during the project year.

**Immersion Program Design**

i2E successfully completed the Immersion Program design specifications which consist of a core curriculum and IT/software entrepreneurship best practices training. An overview and summary of that program design and curriculum is included as *Attachment A* to this Report. i2E expects to begin implementation of the Immersion Program in October of 2012.

**Small Business Innovation Research (SBIR) Assistance Program**

The Oklahoma SBIR Collaborative Resource (OSCR) Program engaged with four Tulsa area companies and one Bartlesville company during the project year. Working with OSCR, all of the companies were educated on the federal program and were able to identify Agency topics relevant to the technologies being developed. None of the Tulsa companies were actively receiving SBIR services at the end of the project year, and the Bartlesville company is projected to submit an SBIR proposal during FY2013. OSCR will provide a SBIR workshop in Tulsa during the first quarter of FY2013.

## *Project Outcomes*

i2E captures and tracks its long-term outcome metrics on an annual basis via its Economic Impact Survey sent out in March of each year. This data is reported in the annual Economic Impact Report released June 30 of each year. We have attached to this report the Tulsa MSA Economic Impact Summary based upon i2E's 2012 Economic Impact Survey and data from i2E's internal Customer Relationship

Management (CRM) database (See Attachment B).  Outcome highlights for i2E Tulsa area clients responding to the Survey include:

- Raising over $8.3 million in equity & debt capital in 2011
- Over $25.6 million in revenues in 2011
- $14.0 million in current annualized payroll
- Average annual wage of $57,141, 53% higher than the 2011 Oklahoma average annual wage of $37,246.
- Introducing 46 new products or services into the market since their inception.
- Since inception, companies have applied for 58 patents, of which 17 have been issued, and 29 copyrights and trademarks have been put in place.
- 228 current jobs with the addition of 91 jobs in 2011, a 66% growth rate.

## *Project Summary and Lessons Learned*

The project allowed i2E and other local economic developers to better understand the depth and breadth of the industry, understand the special needs of targeted entrepreneurs, and to design products and services to meet those needs.

In addition to the specific activities and outcome metrics reported above, i2E and its staff learned much about the IT/Software industry in the Tulsa area.  Some of the main lessons learned include:

- The regional entrepreneurship ecosystem largely consists of first-time entrepreneurs. First-time entrepreneurs need comprehensive support services covering all facets of building a sustainable and scalable company.
- The foundation of delivery framework can be applied to industries outside the targeted IT/software domains. The i2E Immersion Program delivery framework is a vehicle to systematically remove business model uncertainties through quantitative, hypothesis-to-test approach.

# i2E Tulsa Business Immersion Pilot Program
*Program Design and Curriculum Overview*

## Immersion Program Objectives

1. **Identify and nurture very early stage IT/software companies in the Tulsa area.**
   o Early identification and mentoring will provide an opportunity to develop companies that are too early for traditional proof-of-concept financing.

2. **Accelerate the process of finding a scalable problem-solution fit, building a sound foundation for the new enterprise, and locating growth capital.**
   o The Program will provide hands-on post investment involvement including a systematic exploration of problem-solution fit and market validation.
   o The Program will allow entrepreneurs to build a solid company through education on best practices in building a sustainable & scalable company.
   o The Program will position companies for follow-on funding with i2E investment funds or other outside sources.

3. **To provide the most extensive pre-proof of concept acceleration program in Oklahoma.**
   o The Program will create a broader intersection with local, statewide and national entrepreneurial ecosystems for participating entrepreneurs and companies.
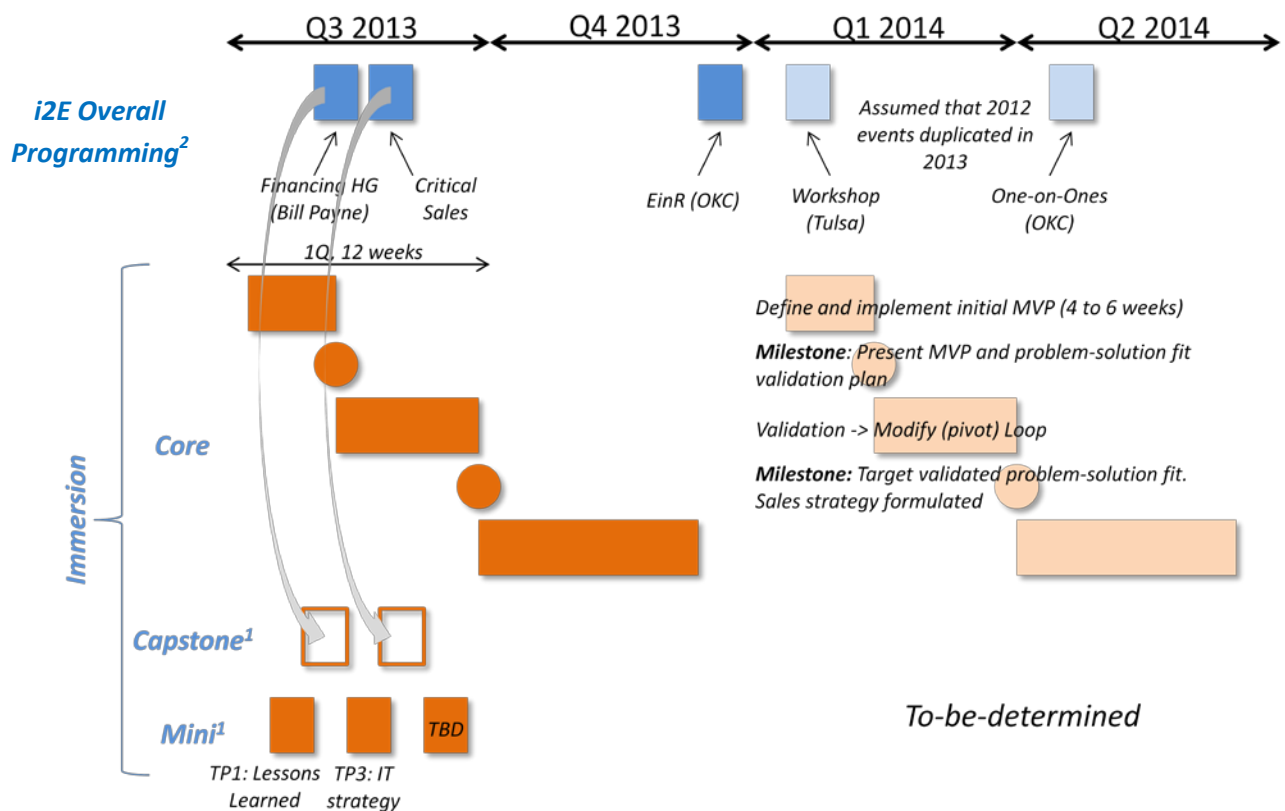
## Immersion Program Participant Profile

**Industry focus:**    IT/Software

**Business stage:**    Pre-revenue, very early stage enterprise

**Product stage:**    Concept, working alpha, limited beta; well positioned to explore problem-solution fit

**Core competency:**    Ability to **quickly** and **cheaply** pivot around the problem-solution fit; most likely led by a team consisting of a business founder & a technical founder

## Specifications of the Immersion Program

- Four to five companies per class designed to reside at i2E's Tulsa Office

- Inaugural class to launch January 2013 with the identification and intake process to occur during October through December 2012.

- Overall program duration is between 12 and maximum of 20 weeks. "Core" program is 12 weeks.

- The "core" program will make best use of i2E's overall services

-  such as Entrepreneurs-in-Residence (EinR) and Executives-in-Residence (EIR) to strengthen the Immersion Program value proposition for all stakeholders.

- The "core" program has clearly defined, tangible milestones which are tied to access to funding. Companies not meeting the core milestones would be subject to disengagement.

- The inaugural class will be selected by i2E staff rather than through a formal competition.   Future classes may or may not use this process based upon lesson learned from the inaugural class.
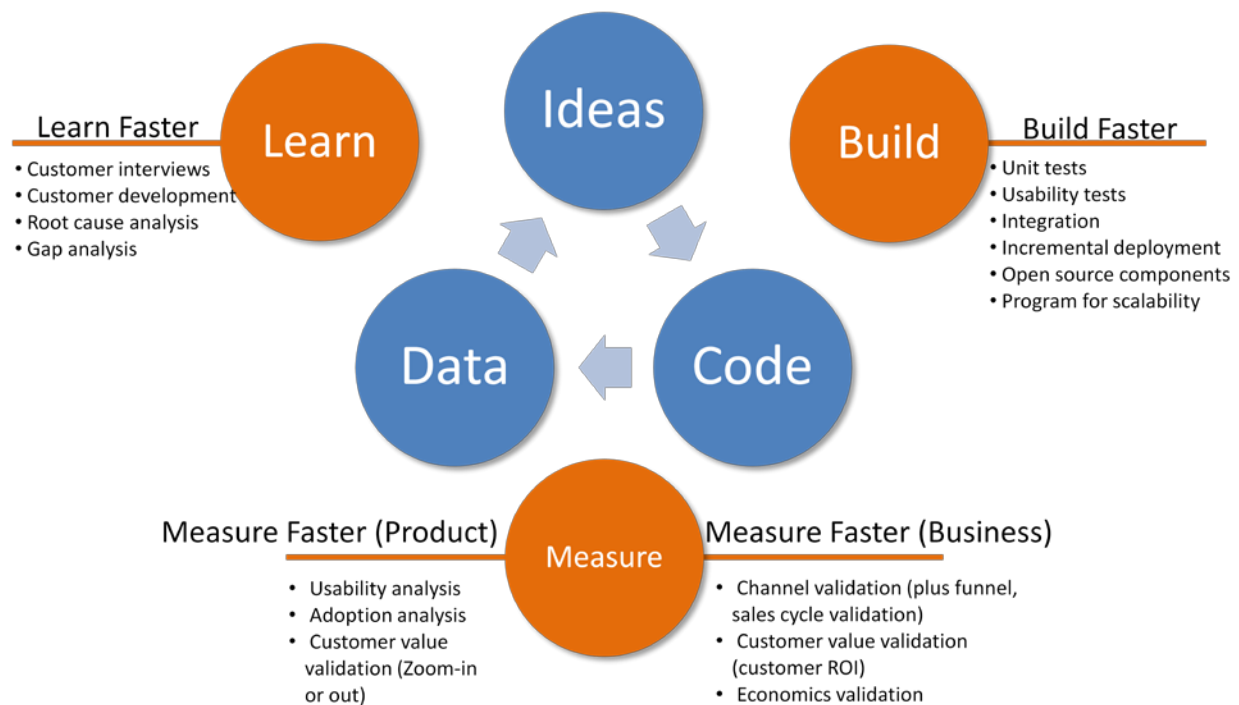
## Immersion Program Timelines



Q3 2013    Q4 2013    Q1 2014    Q2 2014

**i2E Overall Programming[2]**

Financing HG (Bill Payne)    Critical Sales    EinR (OKC)    Workshop (Tulsa)    Assumed that 2012 events duplicated in 2013    One-on-Ones (OKC)

1Q, 12 weeks

**Immersion**

**Core**

Define and implement initial MVP (4 to 6 weeks)

**Milestone**: Present MVP and problem-solution fit validation plan

Validation -> Modify (pivot) Loop

**Milestone**: Target validated problem-solution fit. Sales strategy formulated

**Capstone[1]**

To-be-determined

**Mini[1]**    TBD

TP1: Lessons Learned    TP3: IT strategy

[1]"Planned Curriculum 7-13-12" Lauinger & Kaido
[2]"Event Chart 12-13" as of September 6, 2012

5

## The Immersion Program Process



## Core Immersion Program Activities (Company Pivots)

Very early stage companies are characterized by the highest levels of uncertainties in both product related and business model related uncertainties. The best practice is to identify the core value component of the proposed product or service and perform a series of hypothesis validation tests and modify the product and/or the business model based on the findings. This is done in a repeated fashion until the optimal problem-solution fit is found – this is called pivoting. Potential pivots facing Immersion Program participants might include:

1.  **Zoom-in (Minimal Viable Product) -** Single feature in product becoming the whole product.

2.  **Zoom-out -** Single feature insufficient to support customer. Define gaps.

3.  **Customer Segment -** Reposition for more attractive/appreciative segment and optimize.

4.  **Channel -** Change in mechanism of delivery.

5.  **Revenue Model -** Change in monetization/value capture mechanism.

6.  **Technology -** Using different technology to solve the problem

7.  **Engine of Growth -** Three primary growth engines in IT/software startup is viral, sticky and paid growth. We are only doing paid growth.

## Immersion Program Pivot Categories
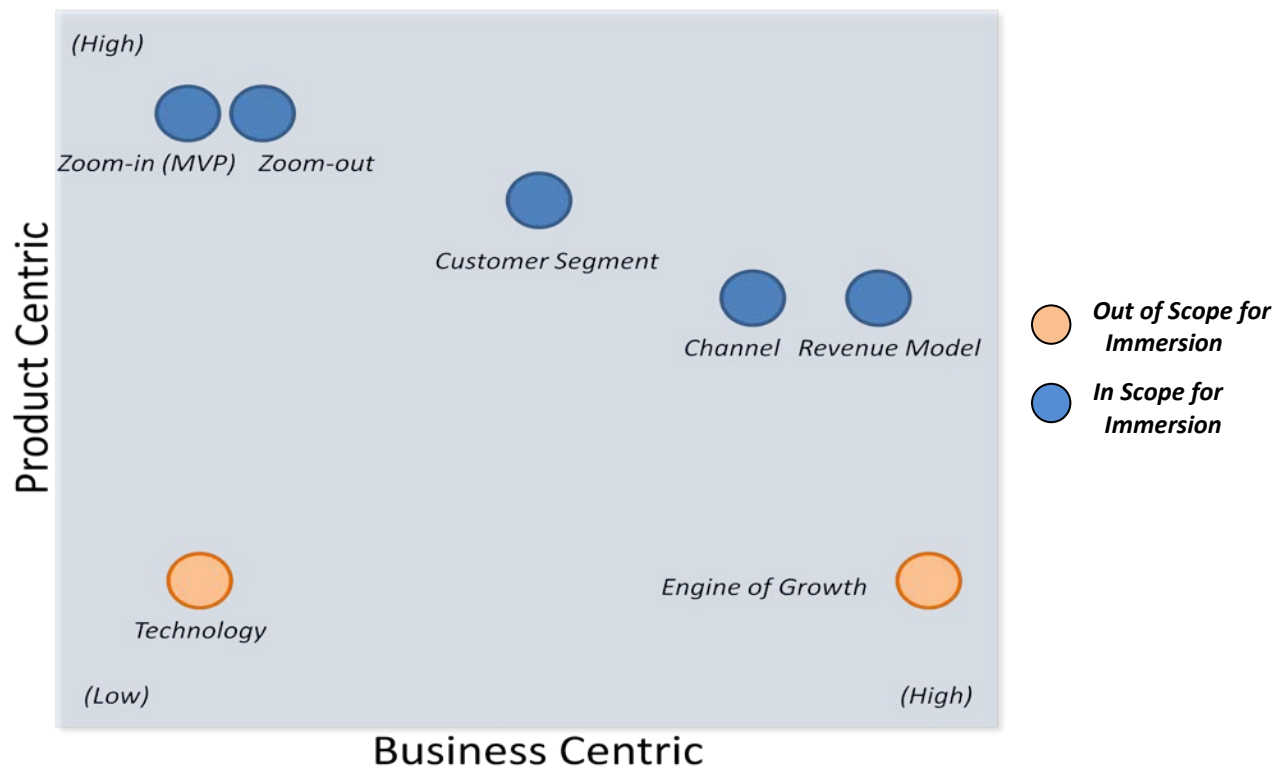


## Immersion Program Metrics

Determining the impact and effectiveness of the pilot Immersion Program will be dependent on the quality of the metrics and the tracking systems. Through its Customer Relationship Management (CRM) system and other mechanisms, i2E will track and measure the following data:

Activity metrics (client company measurement)
- Number of companies achieving i2E approved starting point for product and business model (1st milestone).
- Number of companies achieving i2E approved problem-solution fit through pivots (major milestone).
- Attendance and participation of companies to program events.
- Number of companies positioned in TBFP/StartOK or other relevant funding.

Execution metrics (i2E staff and program director measurement)
- Number of product and or business model pivots performed.
- Client company satisfaction.
- Number of companies enrolled into program.

Outcome metrics (program efficacy measurement)
- Number of companies funded post-graduation.
- Economic impact metrics (i.e. jobs, revenues), of client companies, post-graduation.

# i2E
## INNOVATION TO ENTERPRISE

# TULSA MSA
# ECONOMIC IMPACT SUMMARY
*JUNE 30, 2012*

## *Overview*

Since its inception, i2E has served over 530 Oklahoma technology-based, high-growth potential, start-up client companies. The largest industry sectors for start-up technology companies in Oklahoma are broadly defined as Software/IT and Life Sciences. These companies tend to be distributed between Oklahoma City and Tulsa with Software/IT start-ups predominantly in Tulsa, and the Life Sciences in Oklahoma City. There are many other industries served, but they tend to be in much smaller numbers.

**i2E Total Portfolio by Industry**
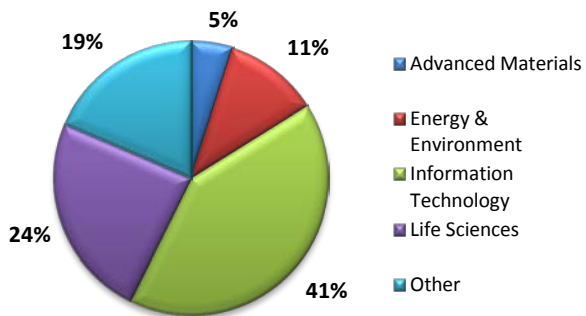
**i2E Tulsa Portfolio by Industry**
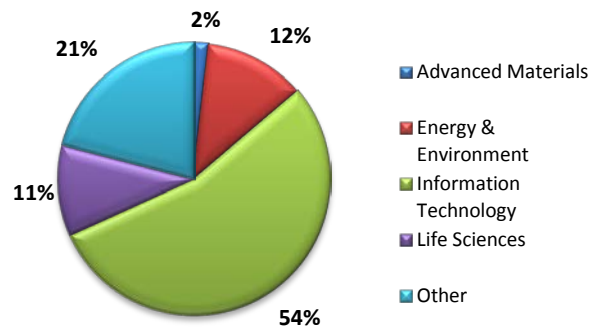
i2E's client distribution continues to reflect the distribution of the state's population and technology-based start-up companies. Of the 534 clients i2E has assisted since its inception, 167 have been Tulsa area clients. The following chart shows i2E clients by region of the state.

**i2E Portfolio by Region**
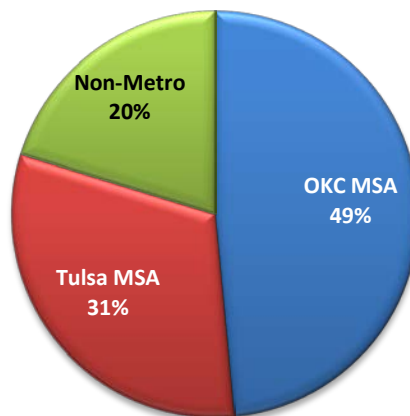
i2E distributes an economic impact survey to its portfolio of client companies every year to gauge their progress in developing direct economic impact generated for the State. A companion satisfaction survey is administered in conjunction with the economic impact survey to companies recently assisted by i2E to: 1) evaluate the perceived effectiveness of the program services; 2) identify needed new program services or extensions; and, 3) identify trends in Oklahoma's technology sector.

The *2012 Economic Impact Survey* results are based on responses from a population of the overall i2E portfolio and allow i2E to monitor key data. This year 96 client companies responded in the survey. Thirty-four of the 96 companies responding to the *Economic Impact Survey* were from the Tulsa MSA. Below is selected information for Tulsa clients from i2E's client database and from responses to the annual Survey.

### *Economic Impact Data*
i2E clients are incorporated business entities with either direct ownership or licensing of proprietary core technology, which can be, or has been, transitioned into a commercial product or service. Of the **105** clients i2E worked with in FY2012, 37 were located in the Tulsa MSA.

In i2E's capital programs, the Proof-of-Concept Fund and the Oklahoma Seed Capital Fund, Tulsa companies are well represented. Of the 108 companies receiving Proof-of-Concept investments over the past 13 years, 37, or 34%, are located in the Tulsa MSA. In the Oklahoma Seed Capital Fund, 5 of the 11 companies receiving investments to date have been Tulsa area companies.

#### *i2E Tulsa MSA Client Summary – FY2012*

| | Statewide | Tulsa | |
| --- | --- | --- | --- |
| | | Number | Percentage |
| Total Client Companies Served in FY2012 | 105 | 37 | 35 % |
| Total Client Companies Served - Inception through FY2012 | 534 | 167 | 31% |
| Total Number of Companies receiving Proof-of-Concept Investments – Inception through FY2012 | 108 | 37 | 34% |
| Number of Companies receiving Seed Fund Investments – Inception through FY2012 | 11 | 5 | 46% |

From data in i2E's CRM system, a total of 168 i2E clients have raised $556 million dollars in private and public investments over the past 14 years. Sixty-one of these are Tulsa companies, who have raised over $118 million. The concentration of Tulsa technology companies in the Software/IT sectors causes them to typically raise smaller rounds of equity investment than the life science companies found in other areas of the state, specifically in Oklahoma City. Below is a summary of investment activity using data from i2E's internal CRM system.

| | Statewide | Tulsa MSA | |
|---|---|---|---|
| | | Number | Percentage |
| Number of Clients raising Equity Investment (since inception) | 168 | 61 | 36% |
| Total Equity Investment (since inception) | $556MM | $118MM | 21% |

i2E also manages the SeedStep Angels, an organized group of Oklahoma angel investors established in 2009.  The initial SeedStep Angel group began in Oklahoma City and expanded to Tulsa in January of 2011 and Ardmore in 2012.  The three groups have closed investments in 9 Oklahoma companies, 3 of which are headquartered in the Tulsa area.

i2E's *Economic Impact Survey* also gathers information on the patents and other intellectual property of its client companies.   Because of its larger Software/IT component, i2E's Tulsa portfolio companies tend to have fewer patents than the life science and advanced materials industries that are more prevalent in Oklahoma City and other areas of the state.

**Intellectual Property Summary - 2012**

| | Statewide | Tulsa MSA | |
|---|---|---|---|
| | | Number | Percentage |
| Number of Patent Applications (since inception) | 301 | 58 | 19.3% |
| Number of Patents Issued (since inception) | 146 | 17 | 11.6% |
| Number of new Products/Services Introduced | 141 | 46 | 32.6% |
| Number of Patent Applications (last 12 months) | 53 | 12 | 22.6% |
| Number of Patents Issued (last 12 months) | 17 | 3 | 17.6% |
| Number of Copyrights and Trademarks | 140 | 29 | 20.7% |

The *Survey* also gathered detailed workforce information from i2E client companies.  Statewide, these companies reported 987 full time jobs, with 279 jobs added in 2011.  Tulsa MSA companies reported 228 full time jobs, with 91 jobs added in 2011.

**Workforce Payroll & Wage Summary - 2012**

| | Statewide | Tulsa MSA | |
|---|---|---|---|
| | | Number | Percentage |
| Current number of FTE's | 987 | 228 | 23.1% |
| Number New FTE Hired in 2011 | 279 | 91 | 32.6% |
| Current Annualized Payroll | $47,961,759 | $14,016,786 | 29.2% |
| Average Current Salary | $70,643 | $57,140 | 80.9% |

i2E clients responding to the 2012 Survey reported $91.9 million in revenues, with a majority of that revenue coming from customers outside the state.  The 34 Tulsa area companies responding to the survey reported current annual revenues of over $26.5 million.  Again, an advantage for Tulsa is the fact that Software/IT companies reach the market faster than many industries.

# Tulsa Community Supercomputer

## Tulsa Research Partners
## Tulsa Community Supercomputer Overview

The *Tulsa Community Supercomputer* is a dense memory supercomputer that is projected to be a top 20 academic supercomputer and the top community supercomputer in the country. This public-private partnership seeks to enable high-tech research, attract top-tier talent, build seamless education pathways, and provide a competitive advantage to capture federal research dollars.

The *Tulsa Community Supercomputer* will extend the current design of supercomputing centers by leveraging universities, colleges, research centers, enterprise, and small business. Amortizing common infrastructure costs between partners reduces operating expenses and lessens the barriers to entry into a computational resource that will enhance research in advanced materials, physics, engineering, mathematics, biology, and medicine. This unique combination of academic institutions and business entities will drive technology transfer and provide opportunities for applied research that complements pure academic endeavors.

There is an immediate need for supercomputing in the Tulsa area demonstrated by discussions with researchers at TU, OSU-Tulsa, OU-Tulsa, Laureate Institute for Brain Research, and major corporate partners in oil and gas, aerospace, and finance industries. In the future, as researchers strive to address increasingly complex computational challenges, high performance computing will become an essential capability to remain competitive for federal research opportunities.

This new capability will be developed in parallel with creating seamless education pathways from the vocational to university level. Hands on curriculum will be created to build a knowledgeable workforce able to address the nation's growing needs in supercomputing. Researchers will also be supported by tailored education, a flexible computer architecture, and a community of like-minded academics.

Developing a resource like this in Tulsa will attract cutting edge research, act as a powerful industry and talent recruitment tool, and become an economic development engine for our region. The *Tulsa Community Supercomputer* will be a focal point for our research community and serve as a facilitator for large-scale collaborative research across a variety of disciplines and industries.

# Tulsa Community Supercomputer

## Tulsa Research Partners
## Why Supercomputing?  An Example from Neuroscience...

We live in a world that is flooded with data and information, and biomedical research is no exception.  In order to transform these terabytes of numbers and data into knowledge that can be used to improve human health, we turn to computation and data mining.  The *Tulsa Community Supercomputer* will play an integral role in this transformation, as we illustrate in the following multi-disciplinary case study.

Bioinformatics and computational researchers at the University of Tulsa (TU) have formed a strong partnership with the recently established Laureate Institute for Brain Research (LIBR), which is a private research institution in Tulsa that uses the latest technologies in high-throughput genomics and functional magnetic resonance imaging (fMRI) to study the brain.  The raw data from a typical fMRI scan can yield approximately 1 GB of data in a 12-minute experiment.  As many experiments are performed on a single subject in a given period, and multiple subjects are examined over time, the necessary storage requirements in a single study can be as high as 700 GB.  In addition, large panels of genomic data are being generated, which can result in 300 GB of primary data for a single subject, with many subjects involved in any given study.

A single computer is unable to store, let alone analyze, the data from a single clinical study at LIBR.  A supercomputer capable of handling enormous data sets and performing huge numbers of calculations can decrease the overall processing time of this type of data from days to hours or minutes to seconds and will be necessary to perform the type of complex network analyses that we envision in the future. For example, it is estimated that to analyze 1 million genetic variants it would take multiple weeks on a single high-powered computer opposed to just 42 hours on 10 nodes of the supercomputer.

The focus of our research is to identify networks that influence brain function, which is challenging even for moderately sized data sets. The unique architecture of the *Tulsa Community Supercomputer* will be essential to understanding the neural circuitry hidden in these data sets that will help suggest new avenues for treatment.  This is but one example of the transformative research that the *Tulsa Community Supercomputer* will enable.

A case study by:

Brett A. McKinney, Ph.D.
Warren Chair in Bioinformatics
Department of Mathematics and Computer Science
University of Tulsa

# Tulsa Community Supercomputer

## Tulsa Research Partners
## The Need for a Supercomputer in our Region...

Why is a supercomputer needed in our community? First, although the University of Oklahoma (OU) and Oklahoma State University (OSU) have sizable resources, which Tulsa academic researchers are eligible to use, these resources are substantially oversubscribed. Second, the largest shared memory footprint at each of OU and OSU resources is 128GB. Thus, the Tulsa Community Supercomputer project would ameliorate the massive congestion on extant cyber infrastructure resources in Oklahoma, and would also provide a unique architecture for researchers in Tulsa and across the state who have large shared memory requirements.

*Henry Neeman, Director, OU Supercomputing Center for Education & Research (OSCER)* states, "I am very supportive of The University of Tulsa's NSF proposal to acquire a cluster supercomputer with large shared memory servers. While the OU Supercomputing Center for Education & Research (OSCER) is delighted to provide our resources to facilitate innovative projects at TU, it has become clear that TU investigators have aggregate computing needs that exceed OU's and OSU's combined ability to address. Thus, TU requires resources targeted at their local endeavors. More importantly, the unique architecture of the TU supercomputer will be a welcome addition to the state's cyber infrastructure portfolio, providing a novel capability that perfectly complements resources at OU and OSU."

# Tulsa Supercomputing Center

**Tulsa Community Supercomputer**
**Research, Education, Economic Development**

## Goals:
- Top community supercomputer in world (35 TFlops)
  - Top 20 academic, top 200 worldwide
- Shared platform for universities, research centers, corporations, small business, and the community
- Integrated education program
- Open participation

## Motivation:
- Infrastructure costs of supercomputing is very high, multiple institutions with small supercomputers have a 60% overhead. Combined platform (4 small vs. 1 large) 1.2m savings
- Solve hard problems in biology, medicine, physics, computer science, aerospace, mechanical/electrical/chemical/petroleum engineering and advanced materials
- Create seamless education pathways from vocational schools to university modeled on computer security education for workforce development
- No resource currently exists in region to utilize and learn from high powered computing
- Tulsa community supercomputer will attract businesses to region based on the development of a supercomputing workforce, academic partnerships and research capabilities
- Serve as a economic development and recruitment tool for university professors, researchers, scientists, and support positions

## Technical:
- Commodity based – around 4200 processor cores
- Large Random Access Memory (RAM) design (unique feature)
- 20 Terabytes of fast storage, 120 Terabytes of network attached archive storage
- Continual upgrade of hardware, 3 year cycle
- Ensures fairness in allocating compute time to members contribution

## Project Organization:
- Professionally managed by full time system administrator, and half time Director
- Governed by OII/TRP and advisory board
- Establish multiple user groups for combined grants, hardware, operations, and education
- Benchmark done yearly for the system as a whole, and for individual members
- Located at a neutral data center

# HELMERICH
## RESEARCH CENTER IN TULSA



HOMER ADVANCED TECHNOLOGY RESEARCH CENTER



### ABOUT US

The OSU-Tulsa Helmerich Research Center is a state-of-the-art materials research, development, testing and education center located in downtown Tulsa. The HRC, home to the OSU School of Materials Science and Engineering, contains laboratories, conference and meeting rooms, and faculty and staff offices. Faculty from mechanical engineering, electrical engineering and materials science and engineering work collaboratively on research and graduate education.

Researchers at the HRC partner with a wide variety of industries and will deliver results for your company. We recognize how mission-critical testing and research requirements are to your business and strive to ensure superior results while protecting your confidentiality. HRC is equipped for certification testing, product analysis and much more. We work with you to develop cost-effective and timely testing solutions and research.

Our world-class team will work hard to understand your needs before embarking on your testing or research needs. Our highly qualified scientists, engineers, lab techs and state-of-the-art testing facility will provide you with the data and analysis you require.

### MISSION

The HRC is focused on providing research, testing, technology transfer and education to advance the region's aerospace, energy, manufacturing, transportation, electronics and medical industries. Research at the Helmerich Research Center has a positive impact on the economy and quality of life for the region and provides opportunities for OSU students and faculty to work hand-in-hand with these industries.

### SERVICES

- Research and Development
- Advanced Materials Testing and characterization
- Composites Testing (Equivalency and Qualification)
- Condition / Environment (DO-160)
- Nanotechnologies
- Chemical Analysis
- Corrosion Testing
- Failure Analysis
- Metallography

### FACILITY FEATURES

The 123,000-square-foot building can house up to 20 faculty and researchers and 100 graduate students. The research center contains specialized laboratories, a clean room, an imaging suite, advanced information technology equipment and faculty offices. In addition, two high-tech seminar rooms, one seating 125 people and another seating 40, are available for research conferences and special seminars. The spacious, central atrium provides a welcoming environment for researchers and visitors to interact.

OKLAHOMA STATE UNIVERSITY
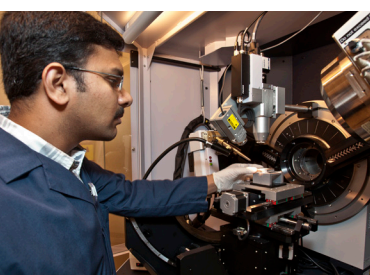
*America's Brightest* ORANGE

## CAPABILITIES

HRC research and testing laboratories are equipped with a wide range of specialized equipment to obtain physical and mechanical testing properties of composite, metallic and non-metallic materials and structures. Tests and research may be performed in accordance with industry specifications and standards, including ASTM, MIL-SPEC, ISO, FTMS, SACMA, ABS, DNV, DO-160 and others. Some of the important properties of composites that can be measured are:

- Strength, hardness and modulus
- Salt spray, humidity and accelerated aging and weathering
- Heat distortion and softening point properties
- Dynamic and static impact
- Shear strength and modulus
- Water absorption
- Peel
- Fiber/resin ratio
- Fatigue and creep up to 1600°C
- Chemical exposure properties
- Drop weight impact
- Microstructural characterization
- Izod and Charpy impact

## EQUIPMENT

- Class-100 Cleanrooms
- Autoclave
- Composite processing facilities
- Multiple environmental chambers and conditioning environments
- Field Emission SEM and EDAX
- Atomic Force Microscopy (AFM)
- Thermogravimetric analyzer
- Optical microscope with video analysis
- Stereoscope x350 with hand-held inspection unit
- Filament winding machine (4-axis)
- Programmable walk-in ovens (500°F)
- Ultrasonic NDI units to perform pulse and echo and TTU scans with curved panel capability
- Walk-in freezers (-20°F)
- Machine shop
- Instron 5567 11 Kip screw testing machine
- Instron 8802 55 Kip hydraulic testing machine with 1600°C furnace
- X-ray diffractometer
- Coordinate measuring machine
- Thermal shock chamber (-160°F to 500°F)
- TA Q800 dynamic mechanical analyzer
- TA Q2000 differential scanning calorimetry
- Fortus 400 mC rapid prototyping machine

## ORGANIZATIONAL AFFILIATIONS

- Society for the Advancement of Materials and Process Engineering
- American Society for Testing and Materials
- American Society for Materials
- Society of Aerospace Engineers
- National Testing Directory
- American Society of Mechanical Engineers
- American Petroleum Institute
- American Welding Society
- American Association of State Highway and Transportation Officials

## CLIENTS

- CleanNG, LLC
- Amethyst Research Inc.
- KT Plastics Inc.
- ETS Lindgren
- Geophysical Research Company, LLC (GRC)
- Metcel, LLC
- Niagara Bottling, LLC

## CONTACT US

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## Conclusion

This Transit Technology Alternative Assessment identifies advantages and disadvantages of each technology in the Tulsa region. Table 6.12 shows the summary of the technology alternative assessment.
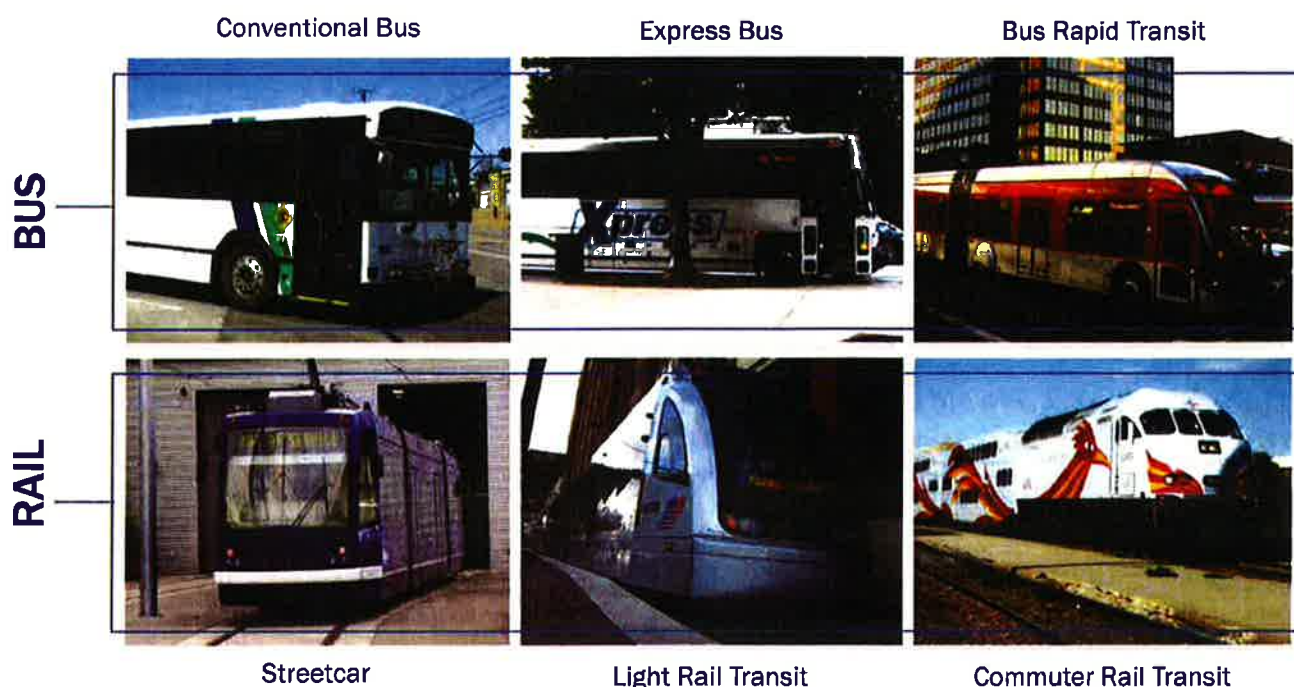
Technologies that received a score of 25 or higher in the nine categories are recommended for further consideration. As

shown in Figure 6.2, conventional bus service, bus rapid transit, light rail, historic streetcar, modern streetcar, and commuter rail are the selected transit technology alternatives are considered in the next level of analysis. During the next level of analysis, these technologies will be further analyzed to determine which technology would be best for each corridor.

**Table 6.12 :** Technology Alternative Evaluation Summary

| Evaluation Criteria | Ability to Satisfy Operations and Service Levels | Compatibility with Existing Transit System | Cost Effectiveness | System Accessibility | System Flexibility | Service Frequency | Environmental Impacts | Land Use Compatibility | Availability of Technology | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Bus | 4 | 5 | 4 | 4 | 5 | 4 | 3 | 3 | 5 | 37 |
| BRT | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 5 | 37 |
| LRT | 4 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 36 |
| Historic Streetcar | 4 | 3 | 3 | 2 | 4 | 4 | 3 | 5 | 4 | 32 |
| Modern Streetcar | 5 | 3 | 3 | 3 | 2 | 5 | 4 | 5 | 5 | 35 |
| Commuter Rail | 5 | 4 | 3 | 2 | 3 | 3 | 5 | 3 | 5 | 33 |
| Heavy Rail | 4 | 2 | 1 | 2 | 1 | 4 | 3 | 2 | 2 | 21 |
| Monorail | 4 | 3 | 1 | 1 | 1 | 4 | 1 | 1 | 1 | 17 |

**Figure 6.2 :** Recommended Technology Alternatives



Conventional Bus    Express Bus    Bus Rapid Transit

BUS

RAIL

Streetcar    Light Rail Transit    Commuter Rail Transit

# Transit Supportive Policies

Supportive plans, policies and procedures are necessary for successful implementation of the RTSP. Specific regional policies can help the community capture the full benefit of transit investments. Transit investments have an ability to help regions achieve diverse community goals in way in which other transportation improvements cannot. Effective transit implementation requires both supportive policies and agencies. To successfully embrace multimodal transit, the region must address policy recommendations related to active transportation infrastructure, urban design, land use and affordable housing.

A diverse set of transit supportive policies and tools have the ability to accommodate community values, reinvestment agendas and economic revival. As the capability of addressing congestion through continued expansion of roadways has become constrained by funding limitations, lack of right of way, federal mandates and growing opposition from citizens' groups, certain transit supportive policy approaches have been developed and utilized across the US. These policy approaches include:

» Improving the quantity of and quality of infrastructure that serves pedestrians, bicyclists and high-occupancy vehicles

» Increasing the price of auto travel relative to other modes of travel

» Limiting urban sprawl

» Encouraging or requiring suburban development at higher densities

» Creating nodes of new high intensity development

The purpose of this section is to present an overview of possible transit supportive policies and identify additional policies that could be implemented by jurisdictions within the Tulsa TMA.

## Supportive Policy Approach

The Tulsa region, as many other major regions in the country, faces a range of environmental and urban problems including, growing traffic congestion; increasing air pollution; residential areas without adequate neighborhood retail services; lack of pedestrian amenities; lack of connectivity between commercial, retail and residential developments, and transit service and facilities; and decline in older neighborhoods and retail areas. While no single policy tool will suffice to mitigate the effects of decades of policies and funding priorities that have favored single occupant travel and low density, single-use development, many communities are finding successful solutions to help induce efficient travel.



## Multimodal Transportation Accommodation

Integration of cyclists and pedestrians into the regional RTSP system is essential to its success. Improvements in both bicycle and pedestrian infrastructure provide a safer, more accessible and healthier system for all users. Transit patrons are generally willing to walk up to one-quarter of a mile for bus transit and one-half mile for rail transit, as long as reasonable walking conditions are provided. Other cities have successfully implemented "Complete Street" policies to ensure that all roadways consider multiple users, including motorists, transit patrons, cyclists and pedestrians. Complete street recommendations vary by roadway design, but often include such features as user-friendly sidewalks, bike lanes, dedicated bus lanes, accessible transit stops, properly marked crosswalks and accessible pedestrian signals. These improvements allow for safe access for all users, regardless of travel mode, ability or age.

Pedestrian facilities and amenities can improve transit-oriented design to ensure accessible, safe and well-designed streets for transit patrons. Design standards can help even relatively low intensity development more pedestrian and transit friendly. Improvements to the pedestrian environment are relatively low cost and increase the probability of pedestrian travel. Numerous strategies can aid in the development of accessible pedestrian environments including bus shelters, landscaping, street furniture, walkways, public art, and access to parks. Pedestrian-friendly station areas typically have land uses which include medium- to high-density mixed uses, utilizing street-oriented architecture. With easy, adjacent transit access,

# The Economic Impact of Nonprofit Arts and Culture Organizations and Their Audiences in

## the City of Tulsa, OK (FY 2005)

| Economic Activity | Arts and Culture Organizations | + | Arts and Culture Audiences | = | Total Expenditures |
|---|---|---|---|---|---|
| Total Industry Expenditures | $3,289,985 | | $19,913,838 | | $23,203,823 |

### Spending by Arts and Culture Organizations and Their Audiences Supports Jobs and Generates Government Revenue

| Economic Impact of Expenditures | Economic Impact of Organizations | + | Economic Impact of Audiences | = | Total Economic Impact |
|---|---|---|---|---|---|
| Full-Time Equivalent (FTE) Jobs Supported | 117 | | 591 | | 708 |
| Household Income Paid to Residents | $2,337,000 | | $9,509,000 | | $11,846,000 |
| Revenue Generated to Local Government | $101,000 | | $1,289,000 | | $1,390,000 |
| Revenue Generated to State Government | $146,000 | | $904,000 | | $1,050,000 |

### Event-Related Spending by Arts and Culture Audiences Totaled $19.91 million (excluding the cost of admission)

| Attendance to Arts and Culture Events | Resident* Attendees | + | Non-Resident* Attendees | = | All Attendees |
|---|---|---|---|---|---|
| Total Attendance to Arts and Culture Events | 524,535 | | 200,161 | | 724,696 |
| Percentage of Total Attendance | 72 | | 28 | | 100 |
| Average Event-Related Spending Per Person | $21.06 | | $44.30 | | $27.47 |
| Total Event-Related Expenditures | $11,046,706 | | $8,867,132 | | $19,913,838 |

### Nonprofit Arts and Culture Event Attendees Spend an Average of $27.47 Per Person (excluding the cost of admission)

| Category of Event-Related Expenditure | Resident* Attendees | Non-Resident* Attendees | All Attendees |
|---|---|---|---|
| Meals and Refreshments | $11.65 | $15.43 | $12.69 |
| Souvenirs and Gifts | $2.88 | $3.01 | $2.91 |
| Ground Transportation | $1.60 | $5.18 | $2.59 |
| Overnight Lodging (one night only) | $0.38 | $12.81 | $3.81 |
| Other/Miscellaneous | $4.55 | $7.87 | $5.47 |
| Average Event-Related Spending Per Person | $21.06 | $44.30 | $27.47 |

* Residents are attendees who reside within the county in which the nonprofit arts and culture event took place; non-residents live outside the county.

Source: *Arts & Economic Prosperity III: The Economic Impact of Nonprofit Arts and Culture Organizations and Their Audiences in the City of Tulsa.* For more information about this study or about other cultural initiatives in the City of Tulsa, visit the Arts and Humanities Council of Tulsa's web site at www.ahct.org.

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