

Final Progress Report for PY2007 on Workforce Information Data Development and Dissemination Activities July 1, 2007 through June 30, 2008

This program year has been unusual in many respects. The TWC has two new Commissioners, each replacing former Commissioners whose tenure dated back almost to the beginnings of the TWC. LMCI staff have been involved in many briefings, meetings and projects to both raise awareness of LMCI products, deliverables and capabilities and to address new areas of interest and concern raised by the new Commissioners.

The most significant threat to our planned program plan has revolved around an upheaval of our computer systems; including complete upgrades of our desktop environments to Microsoft Vista and Office 2007, new multi-function print and communications devices, the elimination of our former e-mail system and transfer of LMCI staff onto the TWC e-mail system, ensuring compatibility of LMCI software applications with Microsoft Vista, and the long-term transition of all TWC servers into a consolidated data center operated by IBM under contract with the Texas Department of Information Resources (DIR).

In the case of the system upgrades to Vista and Office 2007, whereas most TWC departments simply received new desktop computers that had the new TWC required image installed, LMCI has always operated our own server environment and e-mail systems. Because we managed our own desktops locally, many LMCI desktops were not previously connected to TWC servers. Creating these connections required a significant amount of time from LMCI technical staff to coordinate with the TWC Information Technology staff, manage the majority of our own transition, and transfer information from our old network onto the new desktop hardware. The same is true with installing new multi-function devices and transitioning our e-mail system.

The largest interruption to our information development activities is related to the statewide DIR consolidation project. LMCI is affected in several ways. All LMCI production servers that house our external applications have been removed from the LMCI offices and integrated into the main TWC server environment. In the near future, the TWC servers will be transitioned into the IBM central data center. However, because LMCI applications will be a part of that transition as well, all our applications must meet new standards of security/vulnerability and accessibility established by DIR and IBM. There have been many complications wrought by the transition, some of which have been challenging to address.

For example, several LMCI applications rely on a utility called the Adobe SVG Viewer as a tool that allows users to combine geographic regions by clicking on a map. The TWC network does not have, and does not allow the installation of, the SVG Viewer. Not only does this render the mapping function inactive but, because that feature is fully integrated into the flow of the application, the entire application freezes up in the absence of the Viewer. There are no easy work-arounds for this problem, which remains an issue. Similarly, TWC network content filters, whose full limitations are largely unknown to

both TWC IT staff and LMCI programmers, have caused disruptions to formerly stable applications such as TRACER2. Each of these issues has taxed staff time and talents away from primary development work and into less productive remediation activities.

The process of testing and reworking all LMCI software applications, many of which were developed before accessibility requirements were in place, has been especially time-consuming. During the program year the main LMCI website was rewritten to meet all accessibility standards and is fully operational within the JAWS reader software.

Moreover, since LMCI did not retain personally identifiable and thus sensitive user information on our old network, security and vulnerability standards were not required to be especially strict. Since our applications have migrated to the TWC (and soon to the IBM) network environment which does contain very sensitive information, LMCI development staff have spent an exceptional amount of staff time repairing and testing a variety of potential vulnerabilities identified by DIR within LMCI applications. All major vulnerabilities identified by DIR have been addressed through various means. However, this challenge has identified weaknesses in some of our contract applications, such as Texas Work Prep and TRACER, which are likely to require significant re-work.

During this on-going process, LMCI staff have not spent as much time as we might have liked developing new functions and features. We hope that the most significant issues have been faced during PY2007, but we are certain that additional challenges will arise when TWC transitions to the IBM data center.

I. Progress Report on Outcomes as Compared to Planned Deliverables

Texas has accomplished all deliverables specified in the original program plan with two exceptions. Texas has yet to produce statewide and regional short term projections for 2007-2009. A contract RFP is underway to create short term projections for 2007-2011 to satisfy both the PY2007 and PY2008 ETA requirements. Texas has been slow to create these projections for two major reasons; 1) the significant volatility of the recently awakened Texas oil and gas sector tends to play havoc with short term projections, and more importantly, 2) Texas has purchased seat licenses to the EMSI *Strategic Advantage* Economic Forecaster module that generates annual projections by county through 2017. In general, we find this projections tool to be of high caliber following reputable methodologies and quite flexible in its ability to generate county-level forecasts for any designated (annual) time period. For internal operations and to assist small-area economic development inquiries we find this resource sufficient.

The other planned activity that has yet to be completed is the revised version of our *Connecting the Dots II* publication. In all, staff have completed 20 essays on various workforce planning topics—only 12 of which will be used in the final document. What remains is an extensive editing process that has been moved forward into PY2008. Rather than concentrating on editing *Connecting the Dots II* during the later part of PY2007, staff dedicated time to research and develop a compilation of workplace basics. This list of 31 worker characteristics underlying all jobs was developed from over 500 workplace

basics statements gleaned from 15 existing studies. These were integrated into the SWAP application and staff is in the process of writing and formatting a formal publication to communicate the importance of workplace basics to workforce customers and students. We expect to complete the Workplace Basics publication by the end of calendar 2008 and complete *Connecting the Dots* by the end of PY2008.

A. Populate the Workforce Information Database

Texas continued to maintain and upgrade the Workforce Information Database, and our delivery vehicle known as TRACER2, as required under the ETA grant during PY 2007-2008. Some of these changes and enhancements were accomplished to insure full compliance with the new 2.4 schema mandated by BLS/ETA, including modifying the file structure to accommodate the new 2007 NAICS Codes. TRACER2 now contains the new NAICS taxonomy and the Texas 2014 industrial and occupational projections. Parenthetically, Texas will have our 2016 projections available in TRACER2 both as Excel files for downloading in the section we call "The Future" and in the inquiry-based Data Link section of TRACER2 by the middle of October 2008.

Texas continued to serve as a permanent member of the ARC (Analyst Resource Center), thus insuring the interests of Texas are considered in the ongoing development of the data requirements of the WID. This membership also placed Texas in a participatory role in the contract negotiations of the next employer contacts database. This activity has required multiple, national meetings and proven to be quite time intensive.

In the area of data and content loading and updating into TRACER2, during PY2006 our release day procedures were streamlined and redundant tasks eliminated. However, with the changeover of the LMCI computers and the TWC server environment to the new Microsoft Vista operating system, we ran into many complications surrounding uploading and accessing older Excel files. Considerable time was spent chasing Excel file compatibility concerns on LMCI servers. The eventual cause turned out to be an inadvertent filter on the TWC proxy server network that was readily switched off. TRACER2 is fully functional and data from the WID is readily transmitted on a routine basis.

B. Produce and Disseminate Industry and Occupational Projections

During PY2007 Texas produced a complete set of 2006-2016 industry and occupational projections for statewide Texas and all 28 local workforce board regions. Those projections files have been transmitted to ETA and the projections workgroup for general availability. Short term industry projections are still in the process of being created under contract with Dr. Ray Perryman for the period of 2007 through 2011 into order to address short term projections requirements for both PY2007 and PY2008.

LMCI has an extensive array of Internet applications that use the long term projections. Each update cycle requires a significant commitment to supplant existing data with the new projections. In the case of the 2016 projections, this cycle has begun and will continue across all products during PY2008.

C. Publish an annual economic analysis report for the Governor and the SWIB

The Texas Workforce Commission continues to have a limited role in formally describing the economic activity of the state of Texas. This function is commonly provided by the state Comptroller of Public Accounts and the Texas Governor's Office. The Texas Workforce Commission and LMCI have historically endeavored not to produce competing or duplicative analyses to these sources.

For a narrative economic overview of the Texas economy see the website of the Texas Governor's Office at:

www.governor.state.tx.us/divisions/ecodev/bidc/overview#population

For a statistical overview of the Texas economy see the website of the Texas Comptrollers Office at:

www.window.state.tx.us/ecodata/eoind/eoind.html

LMCI does, however, play a significant role in providing useful regional information that forms the basis of workforce, economic development and labor market planning for regional intermediaries. Most of these data are made available electronically to facilitate more interactive, regionally customized labor market analysis that often must transcend traditional politically-designed regions. Among the activities performed by LMCI staff during the PY to address this deliverable are:

SOCRATES has gotten updated data files and staff have made a number of functional improvements, including updates to the County Narrative Profiles (CNP) module. County Narrative Profiles for all Texas LWDAs, counties or combinations of either can be accessed in SOCRATES at http://socrates.cdr.state.tx.us/CNP/index_single.asp.

The initial draft of a publication, code named "*Megatrends Affecting Economic Development and Workforce Preparation Programs*," has not yet been published. TWC leadership has delayed formalizing that document while the Governor's Office continued work on assessing and promoting Texas competitiveness in multiple industry clusters; especially alternate energy. *Megatrends* also has a large section committed to alternative energy issues and LMCI did not want to issue conflicting or competing documents. However, in September we proceeded with a pared down version of *Megatrends*. A professional contract editor has been selected to edit, refine and format for publication the current document. We expect to publish in January 2009.

D. Post products, information and reports on the Internet

While this category is a separate deliverable in the ETA statement of work, for Texas this requirement extends to every aspect of our operations. We do not develop a new data set or product that is not, at least in tandem, made available on the Internet. The vast majority of the products produced in collaboration with our economic development and education stakeholders similarly involve web-based solutions.

The major focus of new software development for PY2007 was in the *Strategic Workforce Assessment Program (SWAP)* and *Texas CARES Online*. Since SWAP embodies each of our newest data initiatives it has received the greatest amount of attention.

We collect a variety of web metrics on all LMCI web based applications including information on user hits, sessions and page views as well as web demographics and additional information on which applications or functionalities users actually engage most frequently. Counts of information disseminated, numbers of inquiries addressed and type of inquiry will help determine user interest and guide product development efforts. This applies to our toll-free career information Hotline as well, where we received roughly 11,800 student calls and 1,400 requests from teachers and counselors for our Counselor Packet which contains single copies of each of our career oriented publications.

Uniform web metrics for all LMCI applications started in May 2006. Prior to this date we had an assortment of use metrics but they were not consistent. The table below offers some use metrics for seven of our applications.

Customer Use Metrics July 1, 2007 thru June 30, 2008					
Application	Hits	Sessions	Sessions per day	Page Views	Page Views per day
AutoCoder	151,453	1,119	11	5,781	15.8
LMCI Home Page	144.3 mil	43,767	120	143,911	393
Industry Profiles	8.96 mil	101,329	277	362,047	989
Reality Check	144.3 mil	355,647	971	9.01 mil	24,807
TRACER	49.1 mil	1.157 mil	3,162	4.12 mil	11,271
Texas Wages	127,460	32,678	89	37,878	103
iOSCAR	24.7 mil	188,273	514	2.97 mil	8,108
Texas Prep	n/a	5,761	n/a	n/a	n/a
Total All w/o TWP		1,879,813	5,150	16,649,617	45,615

The web metrics show increases in total volume and per day volume from the prior year for Texas Industry Profiles, the LMCI web page, iOSCAR, Reality Check and TRACER2. Slight declines were seen in Texas Wages. The AutoCoder application doesn't have any 2007 history nor is it widely promoted so those numbers are misleading relative to the interest of the tool among those who have discovered it. The largest usage jumps occurred in iOSCAR and the Reality Check applications, almost exclusively used by students. Collectively, these websites have over a hundred individual reports. While it is technically possible, LMCI does not track access to each report generated by users across the various systems nor do we aggregate that information for administrative reporting purposes.

E. Partner and consult on a continuing basis with workforce investment boards and key development partners and stakeholders

The leadership of LMCI firmly believes that describing the dynamics of the new economy cannot be done by exclusively using employment data from BLS programs; most of which were developed decades earlier when the economy was much more oriented towards goods-producing industries. While these employment and wages data are important, there are other data and new vendors offering exciting perspectives on the direction and composition of economic activity.

One of the most promising new data series is the Help Wanted Online (HWOL) series being offered through the Conference Board, in connection with Wanted Technologies. Texas has made significant time investments in exploring possibilities and helping to shape future products that might result from the Conference Board's investment in help wanted advertising on-line. Actually, Texas has an interest in using the HWOL time series data as a leading macro-economic indicator as well as viewing the detailed micro data that underlie that indicator. Texas conducted a comparison of Conference Board HWOL data with Work In Texas job postings and organized a pilot beta test of Wanted Technologies Wanted Analytics v. 1.0 software. Results from that beta test were very encouraging and many of the features we recommended have now been incorporated into v. 2.0. After another best test during October 2008, it is our expectation that LMCI will purchase multiple seat licenses to Wanted Analytics v. 2.0 for PY2008.

LMCI renewed our subscription to the EMSI *Strategic Advantage* software package in coordination with the Texas Comptroller's Office. The EMSI data product offers features for doing small area economic forecasting without data suppression and estimating indirect and induced multiplier effects of plant relocations or expansions that have proven quite useful. It also gives us detailed, small area, short term projections that prove very useful for addressing requests from regional economic development customers.

We also purchased another year of Global Insights industry sales data. This gives us a five year time series of county-level, four digit NAICS industry sales data. In PY2008 we will begin to integrate the sales data into SWAP, starting as a variable in the new SWAP Indeval model.

In our last program plan, TWC leadership believed that a continued investment in Sites On Texas was a worthy investment for DOL/ETA LMI funding. That relationship continued during PY2007, mostly with LMCI staff providing BLS data sets for the SRC contractor to integrate into the software package. Customer usage metrics for the program year from SRC are attached to this report. For PY2008 LMCI staff will also provide employer contact information to SRC under a three-way agreement with infoUSA.

LMCI data dissemination staff continued to field technical assistance requests both over the phone and through the Internet. Staff responded individually to over 1,694 customer inquiries for LMI during the PY and fielded another 350 technical assistance requests through User Support e-mails in Texas Industry Profiles.

As in previous years, LMCI produced four Quarterly Census of Employment and Wages publications for the 3rd and 4th quarters 2007 and the 1st and 2nd quarters of 2008.

LMCI produced twelve (12) Texas Labor Market Review monthly newsletters for July 2007 thru June 2008. Each edition was published electronically on TRACER2. However, effective January 2008, we no longer produced a hardcopy version of the newsletter. The cost savings have been significant, customer complaints have been minimal, and the electronic format allows us broader flexibility to add pages, change formats, insert articles and archive past editions.

LMCI staff provided sixty-four (64) external training workshops and presentations in a variety of subject areas including the state of the Texas economy, use of LMCI automation tools, LMI for regional planning, Connecting Education and the Economy, and Career Orientation Training (COT) (see attached list of trainings). This number was down from last year because our primary trainer was on maternity leave for half the year and unavailable to schedule workshops. However, we increased the number of trainings and presentations relative to staff availability.

In addition to our coordination work with BLS programs and external economic development, LMCI staff continued to work closely with the Texas Education Agency (TEA) on a variety of projects. Among the most significant coordination activities were:

- a. LMCI staff participated in the workgroup formed to identify high skill/high wage occupations in Texas as required under the federal Carl Perkins legislation.
- b. LMCI participated as a member in the Career and Technical Education (CTE) Review Panel which is responsible for providing input and guidance in the rewrite of CTE curricula.
- c. Negotiated a grant between TEA and TWC/LMCI for PY2008 to sustain Perkins section 118 activities.

F. Conduct special studies and economic analyses

An ever-increasing number of customer questions seem to require not just filling a data request but piecing together multiple data sets to create an analysis. Thus, LMCI Dissemination staff operate more like consultants than simply information resources. This is not surprising since so many raw data sets are made available through our own Internet-based tools and other web sites; especially those operated by Census, BLS and the DOL/ETAs Career InfoNet. Customers are looking for data interpretation and specialized studies around their unique situations. The LMCI leadership believes that our web tools, built around addressing certain common challenges of regional planning, provide these customers with the ability to answer questions independently. Our Dissemination staff use our own tools to address many customer inquiries; both giving the customer the data they need and showing them how to answer the proverbial next question. Toward that end, in our PY2007 ETA strategic plan document LMCI planned to enhance and expand functionalities in several of our web tools—with a heavy emphasis on improving the capabilities of the Strategic Workforce Assessment Program (SWAP) web tool.

During the program year LMCI staff introduced two additional versions of the Strategic Workforce Assessment Program (SWAP). SWAP provides datasets and interactive data tools to enhance economic development and strategic workforce planning relative to the Governors clusters. The capabilities of SWAP were showcased at the DOL/ETA WIRED conference in April 2008. Among the new features introduced during the program year are:

- a. Detailed Work Activity (DWA) reports - SWAP allows the user to generate individual occupation DWA reports, a DWA Profile of all critical occupations in a given cluster, and a gap analysis DWA profile that lists those DWAs important to critical occupations in a cluster that might be in short supply relative to the skills of the existing regional workforce.
- b. A <Modify Cluster> feature that not only allows users to add or delete industries from a predetermined cluster definition but also to build a cluster from scratch using 1) user selected industries based on keyword or code search, 2) a regional Industry Evaluation Model (Indeval), and 3) a detailed (4 digit NAICS) shift-share model. The Indeval option and the shift-share option have not yet been moved to production pending some additional testing and documentation.
- c. Missing Link reports – The DWA gap analysis report also allows the user to identify the education and training programs connected to acquiring the knowledge and skills needed to perform each of the DWAs.

LMCI staff, in conjunction with contractor ICF Caliber of Washington, DC completed the “Missing Link” project. Missing Link is the code name for the creation of a comprehensive database linking occupationally-specific detailed work activities (DWA) from the O*NET database to technical programs of study (CIP-based) and Workforce Education Course Manual (WECM) courses offered in Texas community and technical colleges. The database created from this project was fully integrated into the SWAP program to provide a connection between critical DWAs within a cluster and the education and training programs connected to them.

One of the final pieces to effectively operationalizing SWAP is the review, modification and validation of the original O*NET DWA library. The DWA statements in O*NET are inconsistent and many have awkward language, double-barreled meanings, etc., thus making them the “weak link” in our cluster analysis. Because LMCI is making a significant investment in DWAs as a common currency to better connect education and the economy, it was important to begin a process of validation of those statements by Texas employers. During the PY2007 LMCI issued a RFP to engage a contractor to marshal the validation process. That competitive procurement was awarded to SkillsNet Inc. from Waxahachie, Texas. SkillsNet is proactively including local workforce boards to recruit subject matter experts from Texas employers to participate in the validation process. SkillsNet will complete the validation of the first 200 SOC occupations by the end of calendar 2008. If the project is completed successfully LMCI will extend the agreement to include a second round of 200 occupations. In addition to the validation exercise, LMCI has procured from SkillsNet a list of industry certifications cross-referenced to DWA statements and also a cross-reference between civilian DWA

statements and military occupations. This latter effort is leveraging a program completed in a prior year between SkillsNet and the Navy to map military tasks to civilian tasks.

LMCI applications development staff completed an updated Windows-based version of *Texas CARES v. 7*. The new version was completely updated with new employer data and college tuition cost information plus over 100 other school characteristics for over 3,000 colleges nationwide. It includes updated occupational projections, training programs and wage data, occupational and Texas college videos and many more interactive features including access to the on-line *High School Graduation Planning* program. It was also made Microsoft Vista compatible. Similarly, staff updated occupational information in our *Occupational Career Clusters Digital Video Show* and reformatted video within the application to make it Microsoft Vista compatible.

LMCI applications developers completed the beta version of *Texas CARES Online* at www.texascaresonline.com. The on-line version incorporates the look and feel of the Windows-based version of *Texas CARES*, plus integrates the best features from our popular iOSCAR skills transferability software. The system is in beta test mode and currently undergoing review and comment, minor language changes and additional help and “What’s This?” documentation. We expect to make the *Texas CARES Online* available by the end of the calendar 2008.

Completed and released new versions of our popular high school and middle school tabloids. The high school version retained the same *Career Success* name but the design, layout and content are all new. The middle school tabloid, formerly named *On Your Mark*, underwent an entire transformation. It is now called *Career Investigations* and fully integrates the 16 Achieve Texas career clusters. The newspapers were printed in hardcopy format and posted on the home page of the LMCI web site in e-zine formats. Each tabloid has a Teacher’s Guide to assist those that would like to use either tabloid as a part of classroom activities. The Teachers Guides have been completed and are in the review and comment stage before printing.

LMCI staff completed the annual Automated Follow-up reports for PY2005-06 education and workforce program exiters. Follow-up staff also developed a LWDB cross-program outcomes reports that includes associations between the targeted occupations process and labor market outcomes. Staff also completed snapshot and longitudinal studies of Project RIO, the ex-offenders program, in cooperation with our Workforce Division staff.

Finally, our Applied Research unit completed a new publication called *Green Collar Workers and Other Mythical Creatures*. This publication offers a comprehensive examination of the impacts of a greener economy on the labor market and offers insight on possible operational definitions for measuring green collar workers and estimating the impact of a greener economy on green collar worker preparation.

II. Customer Consultations

Clearly customer satisfaction is an important part of any LMI operation. A former LMI Director once said that products that don’t address a customer need are mere vanity to the

producer—and we concur. We also have a responsibility as labor market professionals to help our users understand the more relevant questions they might ask regarding regional economic dynamics. This is one reason the Deputy Director makes so many presentations in local venues; to teach and to assess the most salient customer concerns.

LMCI staff have been very proactive in helping shape policy directives and planning requirements at the state and federal levels before they reach the local customer. The LMCI Director serves as a member of the Workforce Information Council (WIC) and is a member of the BLS Current Employment Statistics (CES) Policy Council. The Deputy Director serves on the Census Bureau's Local Employment Dynamics (LED) Steering Committee, a member of the ETA initiative known as WIN-WIN designed to envision the LMI system of the 21st century, a member of the National Academies Panel on the Occupational Information Network (O*NET), a member of the Texas Education Review Panel of Career and Technical Education, and a taskforce member of the Texas Higher Education Coordinating Board's Higher Education High Tech Taskforce. Each of these associations allows us to interact with customers and shape reasonable data-driven policy.

Recognition of our efforts has been reaffirming. The Deputy Director was named the Central Texas Workforce Professional of the Year for 2007 and designated as a Distinguished Lecturer by the Texas Associations of School Boards and School Administrators. We routinely receive requests from other states to replicate tools that we have developed, most notably the Reality Check software, our *Careers Are Everywhere* elementary workbook and, most recently, our SWAP application.

LMCI routinely coordinates with our customers in the TWC Workforce Division responsible for WIA implementation. Among coordination activities accomplished during the program year were 1) workforce program follow-up to identify labor market outcomes of WIA program completers, 2) special follow-up studies for Employment Services and Project RIO for ex-offenders, 3) policy discussions guiding regional labor market planning guidelines and the use of SOCRATES, 4) the use of SWAP in assisting workforce boards to address Governor-identified industry clusters as part of their economic development efforts, and 5) collaboration with Work In Texas staff to implement access to the Conference Board's Help Wanted Online data tool (WIT staff are eager to adjust electronic reporting formats so that job postings can be picked up by the Wanted Technologies web spyder technology).

III. Recommendations to ETA

Texas appreciates the flexibility allowed by ETA to provide the kinds of specific deliverables deemed necessary at the state level within broad categories identified by ETA. Texas also appreciates the efforts of ETA regional staff to keep us informed of federal initiatives that may have a bearing on state policies and approaches. We encourage ETA to retain this policy direction. Texas would be willing to participate in additional discussions between state and federal staff regarding the deliverable requiring the development of an economic analysis for the state. There are so many complexities and such a wide array of stakeholders within each state surrounding this kind of product

that perhaps an alternate or optional deliverable category could be identified for states that have partner agencies or entities with this same responsibility.

Texas is encouraged by the progress being made through the partnership between state LMI shops and the Census Bureau regarding the Local Employment Dynamics (LED) program. We applaud ETA's participation as a funding agent and we encourage ETA to continue their active participation as part of the partnership. We would encourage ETA to investigate several related projects being undertaken by Census, especially the job flows research, as they have exceptional potential to assist planning for dislocated and transitioning workers.

Texas also would like to encourage ETA to participate in the Conference Board's initiative relating to on-line help wanted job postings. The fledgling efforts being made by the Conference Board show tremendous promise for understanding help wanted advertising as a leading economic indicator and the underlying micro data and analytical tools should prove extraordinarily helpful in direct job placement under TANF/CHOICES and WIA.