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National Broadband Plan
Broadband Access for All Americans
Facilitating an Efficient and Effective Labor Market

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Background

Broadband is a critical enabling technology that will allow all Americans to fully participate in the digital economy and to have access to the Internet and other tools needed to make their lives that are healthier and more productive.

For this aspect of the plan, we will assume broadband access and seek to answer the question – how should Americans be able to use this access to become more effective and productive actors in the US labor market. There are already numerous job banks and resume services in the market; while these are important, many of them serve only niche and high end markets and often leave average Americans with few real digital options. There are a number of public sector actors in the national workforce development system. A large number of them for adults and out of school youth are coordinated through the One Stop Career Center system financed by the Department of Labor through the Workforce Investment Act (WIA). There are significant efforts financed by the Department of Education through the Perkins Act (vocational and technical education in high schools and community colleges), the various programs that finance higher education assistance (Pell Grants, direct student loans), and various grants for State level vocational rehabilitation programs. The Department of Veterans Affairs, through the GI Bill and its vocational rehabilitation programs touches more than a half million veterans each year. Health and Human Services also has significant workforce involvement through its welfare to work efforts (grants to States) and its Ticket to Work (performance-based efforts to move individuals from disability payments to work). The Departments of Agriculture (Food Stamp Employment Program) and Housing and Urban Development (Move to Work and ROSS grant programs) have efforts that primarily seek to link individuals using their services with public and community-based employment and supportive services resources that connect them to better employment opportunities.

The public response seems fragmented from the standpoint of the customer and can be confusing even for workforce professional and those serving coordinating functions in the WIA-financed One Stop centers. There are also some major gaps in the tools that are available students, workers and employers. For example:

- There is no one place where individuals can coordinate all their own activities related to career development.
- There is no place where individuals or employers can find all the education and training resources available in their communities or online.
- There is no place where individuals or employers can find real time information about supply and demand in their local labor markets.

- With the demise of America’s Job Bank, there is no longer an official national labor exchange (although a public/private partnership has taken up the role in the form of the JobCentral National Labor Exchange).
- Most public programs which pay benefits for those who are not working (unemployment insurance, is the largest example) do not automatically engage their claimants in immediate job search or job retraining activity.

With universal broadband access, the federal departments who are responsible for various workforce related activities have the opportunity to fill in those gaps and to create a true 21st century career development system that can quickly respond to the changes in the US and global economy because it harnesses the involvement of tens of millions of individuals and employers.

Let us explore in some detail the elements of the potential federal response to this opportunity.

A 21st Century Career Development System for America

Universal broadband will provide access. Federal Departments need to respond with content, products and services that make it possible for individuals and employers to navigate and prosper in the highly dynamic US economy. The American Recovery and Reinvestment Act (ARRA) stopped the slide of the US economy and set the stage for a robust recovery. The new economy that will emerge in that recovery will be substantially different from the economy of just a few years ago. It will be greener. It will be less driven by construction and finance. It will require new skills and new combinations of old skills. It will demand the workers and employers adapt quickly to take advantage of opportunities. To be successful, the actors will need to be armed with better information and better tools. They need to be able to access training in a more “bite sized” form – not a whole program but a single course or cluster of courses; eventually not even a whole course but a set a modules that target the exact skills and knowledge needed to take advantage of a new opportunity.

This parallel effort will be a series of programmatic and policy responses designed to improve the efficiency and fairness of the US labor markets. They will center on actions that should be taken by the Education and Labor Departments and the State/local public workforce system that WIA finances. There will also be a strong role for the Department of Health and Human Services and supporting roles for the Departments of Agriculture, Commerce, Defense, Veterans Affairs and Housing and Urban Development.

This part of the Administration’s overall agenda has two short term goals (fairness and efficiency) and one long term goal (competitiveness). In the short term, it is designed to make sure that Main Street participates in the benefits of the massive stimulus package (fairness) by making sure that the unemployed and others receiving public income support can quickly connect to the new job opportunities and have easy access to the skills/training needed to qualify. This is done by adding technology and shifting the focus of the public workforce systems. Also in the short term, it is designed to dramatically improve the efficiency of the labor market making links between the unemployed and jobs faster and moving those who are in danger of long term unemployment through skills obsolescence are directed to appropriate retraining very soon after their layoff.

In the long term, the goal is more ambitious – create a US labor market and talent development system that adapts quickly to the demands of a global marketplace where speed of innovation is the critical competitive advantage for our country. Putting a sophisticated understanding of the dynamics of the labor market in the hands of job seekers, students, employers and counselors, so that

- individuals can become true career entrepreneurs locating their own skill gaps and finding the right training to fill those gaps
- training institutions spot demand trends and develop “bite size” training to meet emerging skill needs
- counselors move beyond the conventional wisdom of more school is always better and are able to provide their clients with a sophisticated analysis of the economic impact of a whole range of degrees, certificates, certifications and course clusters.
- employers are willing to invest in worker training because it has become more competency-based, requires less time to complete, costs less and is easier to find.

In short, producing the highly flexible and quickly adapting labor force required for the US economy to stay competitive and to spread the benefits of prosperity to all aspects of society.

The Core Elements of the 21st Century Career Development System

The elements of the system can be grouped into two broad categories: critical content and connection tools. In some cases these elements exist and simply need to be enhanced or connected. In other cases, they will need developed.

Critical Content Elements:

- National Labor Exchange
- National Learning Exchange
- National Social and Human Services Locator
- National Career Information Network
- Real Time Labor Market Information System
- Longitudinal Labor Market Information System

Connection Tools:

- Career Management Account
- Rapid Employment (Reemployment) System
- Rapid Retraining System
- Veteran and Military Spouse Career Scouts

Each of these elements will contribute to a system that allows workers and employers to rapidly adjust to a changing economy and to be constantly adding value to our national stock of human capital. Just as important, these tools are designed to ensure that all individuals have to the information and services they need to succeed. A core element for the individual will be the Career Management Account which is a tool that can be initially provided by any number of the federally sponsored programs; however, its critical value is that once provided it becomes the individual's own and then moves with them throughout their careers. The Career Management Account allows the individual, rather than the program, to "own" the data and be in control of what is shared. It is critical to creating "career entrepreneurs" who are invested in their own futures and career development. However, individuals using the Career Management Account do not need to operate alone; the tools should be built so that counselors working for government programs or community-based services can tap in to provide services with the "owner's" permission.

In looking at each of the critical content and connection items, we will do several things: describe the item in detail, estimate the cost to build and maintain that element of the system, estimate the cost of building the capacity of organizations so that they could effectively use the element, suggest the federal agency that should take the lead and those who should play a significant supporting role, and finally estimate, if possible, the possible return on investment for that particular element (or that element as a component of a larger system).

Beyond, the new content and connection tools, there will need to be capacity building efforts with agencies that can interpret the new data and will staff on the ground that will be using the new tools. The capacity building efforts will be described at the end of the paper.

Critical Content Elements

The New National Labor Exchange

Until June of 2007, the US had the most successful public sector national labor exchange in the world – America's Job Bank (AJB). The prior Administration, in an act of amazing short sightedness, killed off this tool just a few months prior to the beginning the recession. The State level agencies charged with managing the public workforce system saw the demise of as a potential disaster and sought to form a public/private partnership that

would preserve a national electronic labor exchange. That partnership was ultimately formed with the Direct Employers Association and created the JobCentral National Labor Exchange in March of 2007. A little history on Direct Employers will be helpful in explaining why the partnership was formed and why it has been successful.

The Direct Employers Association was created by large employers in 2001 who were concerned about the direction of the online recruitment marketplace – specifically the ever increasing costs of online recruitment ads and the trend toward putting barriers between the job seeker and the companies providing the jobs. These employers saw the requirements of Wall Street for constant quarter over quarter revenue and income growth as driving the commercial job boards’ business practices. The Direct Employers Association (DEA) was formed as a non-profit business association precisely to avoid the Wall Street focus of constant profit growth and to bring a very low cost alternative into the market that would focus on connecting job seekers with real jobs. The organization’s job board is JobCentral (www.jobcentral.com). Direct Employers finances the site and other operations through annual dues from its member companies.

The JobCentral model is designed to serve primarily as a clearinghouse for jobs that are distributed out to over 3,000 other job websites. (Eight hundred of those sites are connected to college career centers through an alliance with the National Association of Colleges and Employers – NACE.) The JobCentral site gets direct traffic but the overall strategy is to make sure that job openings are seen in any one of the thousands of sites rather than paying the big dollar to get them seen on one of the big three commercial boards (Career Builder, Hot Jobs and Monster). This strategy recognizes that the vast majority of job searches occur on the smaller boards. JobCentral effectively becomes the content (jobs) provider for these smaller boards and the jobs from its member companies are then seen more frequently than they would be through a placement on the large commercial boards, at a fraction of the cost.

The addition of the public workforce system to the distribution network added immensely to the reach of JobCentral, adding thousands of local “retail” outlets visited by hundreds of thousands of job seekers each day. Collectively, the JobCentral/NASWA network of smaller boards and One Stop Career Centers gets more job seeker traffic than the big three job boards combined.

When the President’s FY 2007 budget eliminated funding for America’s Job Bank (AJB), DEA had a new set of concerns – one focused on recruitment and the other on compliance. AJB was serving both functions. For recruitment, AJB helped companies with locations in multiple States and jobs across the entire economic spectrum to reach the millions of workers who use the public workforce system as their source of job finding assistance. For compliance, AJB provided a one stop shop for federal contractors seeking to comply with the mandatory job listing requirements of the Jobs for Veterans Act.

DEA developed a partnership with the National Association of State Workforce Agencies (NASWA) to build a replacement for America’s Job Bank to serve those twin purposes – recruitment and compliance. NASWA, having reviewed the DEA proposal and a competing plan, chose the DEA approach for several reasons. Both NASWA and DEA were non-profits focused primarily on services using policies designed to make the US labor market more efficient and effective. They shared a vision and mission. And NASWA believed the DEA business model was both solid and sustainable. The partnership agreement was signed in March of 2007. Since then 49 States have signed participation agreements and literally tens of thousands of jobs are daily moving back and forth between the State and the JobCentral sites. JobCentral created a VetCentral service to deliver jobs directly the local offices of the public workforce system to serve the compliance needs of the member companies under the Jobs for Veterans Act and the employment needs of the millions of veterans who use the public employment system each year. Additionally, thousands of jobs are being delivered each day through VetCentral to One Stop Career Centers and local veteran employment representative so that veterans can get into the front of the line for good jobs.

The DEA’s corporate membership is expanding having grown from 165 when the partnership agreement was signed in March of 2007 to nearly 500 in October of 2009. As part of its agreement with the States, DEA has agreed to index the jobs of any company which gives the state permission. Those jobs are included in the JobCentral site and available for the State to download. JobCentral draws jobs from thousands of corporate job websites and from nearly all of the State job banks. Its average daily collection of job openings is as large as that contained in AJB during its life. The job collection will continue to expand as more and more companies are drawn to this low or no cost option to reach millions of job seekers.

The JobCentral/National Labor Exchange is about to get even larger. Direct Employers has been selected to build out the “Dot Jobs” (.jobs) top level domain (top level domains are .com, .org, .edu, etc.). DEA was selected for this task for much the same reasons NASWA selected it as the partner to recreate the national labor exchange – it has a mission to make the labor market work more effectively. Firms will only be able to get their jobs into the .jobs domain in one of three ways – purchase their company name (e.g. ibm.jobs), have their jobs indexed by JobCentral, enter their jobs through one of the State job boards (at no cost) and have them uploaded into the national labor exchange. While it is not likely that there will be .jobs Super Bowl ads, jobs delivered through the .jobs system are expected to become the most seen on the Internet through the magic of SEO (search engine optimization).

Most job searches do not begin on a job board; they begin on a search engine like Google with someone typing in a phrase like “nursing jobs in Denver.” Individual jobs do not pop up in the search results but job board “landing pages” do. Because of the way search engines prioritize their results, the creation of the “.jobs” domain (combined with specific SEO strategies being pursued by JobCentral) will quickly push JobCentral generated landing pages near the top of the search results (and push results from Monster or Hot Jobs down the list). Because employers want their jobs seen, they will increasingly be drawn to the JobCentral and the .jobs system. More jobs will mean even more searches. And, for the job seeking public, it will mean all the good jobs will be in one place – a place with a very public sector like mission.

Recognizing the Reality of JobCentral as the National Labor Exchange

With the country moving through a serious recession, it would be a major tragedy that the US is the only industrialized country without a publicly-funded national labor exchange. Fortunately, the national labor exchange function was preserved by the unique public private partnership formed by DEA and NASWA. The federal government will need a national labor exchange as part of its efforts to move the unemployed into new jobs and to serve as the job matching component in its Green Jobs, Clean Energy and Public Works initiatives. If JobCentral did not exist, the Administration would need to reinvent it because of the strong focus on jobs that will be necessary during the initial phase of the term.

JobCentral has exhibited a strong willingness to play a very public sector-like role. JobCentral is currently working with States to implement a reemployment effort that includes the creation of an **outplacement network** and a **career events network** to facilitate the connection between laid off workers in one industry and jobs in another. JobCentral already has committed to create a “Green” Jobs version of its core site and is willing to create other such sites to support the public workforce agenda.

The Administration should consider some or all of the following steps to recognize JobCentral as the official national labor exchange and successor to AJB:

- The Secretary of Labor should designate JobCentral as the “system for clearing labor between the States” under 29 USC 49b (a) including agricultural labor clearance under 20 CFR 653.501. The process for clearance of agricultural and other temporary immigrant labor now involves the faxing or mailing of paper copies of jobs to neighboring States and the hand entry of those jobs. The automated process already in place with JobCentral would save precious time and resources that could be devoted to helping our citizens find new jobs.
- The Secretary of Labor should, through the authority to prescribe “minimum efficiency standards,” require that States accept and integrate the download of jobs from JobCentral because it constitutes “information as to opportunities for employment and other information of value in the operation of the system” as specified in 29 USC 49b (a). At a time when unemployment is rising, adding to the supply of job openings seen by the millions applying for unemployment benefits is sound policy.
- The Secretary of Labor should recognize JobCentral as a critical element in the provision of a “nationwide system of public labor exchange services” under 29 USC 49b (c) (1).
- The Secretary of Labor should recognize the use of VetCentral for distributing jobs to the employment services delivery system as a “safe harbor” in terms of compliance with 41 CFR 60-300.5.

Lead Agency

The lead agency for the National Labor Exchange should be the Department of Labor. It already provides grants to the State workforce agencies that are the “public” portion of the public/private partnership that recreated the NLX.

Costs

The cost is very small – simply the issuance of directives. Recreating AJB and all the traffic it saw might cost \$100 million. Simply recognizing the reality of JobCentral and VetCentral will turn out to be “priceless.”

Re-Creating a National Learning Exchange

Background

Both the US and the UK began efforts to create national learning exchanges in the late 1990's. The US effort was led by the Labor Department and designed to be connected intimately with the suite of services that included America's Job Bank and America's Career Information Network. The UK effort was led by their University for Industry and designed as a stand alone service.

The UK effort blossomed into the Learn Direct system (www.learndirect.co.uk/) which is the largest learning exchange in the world with nearly 1 million courses available for search. The US effort resulted in America's Learning Exchange (ALX) (www.alx.org) which unfortunately was defunded by the Labor Department in 2001.

Unlike in the case of the national labor exchange where a public private partnership was able to step up to preserve it at no direct additional cost to the government, the government will need to invest directly in recreating a national learning exchange. The public sector involvement in this task is critical because no sustainable private sector model for such a learning exchange has been developed in the US or other parts of the world.

Fortunately, much of the work done in the original ALX effort was not lost entirely. Much of the code base still exists. More importantly, the tremendous effort expended to create a detailed taxonomy for classifying course and linking them to skills required by individual occupations has been preserved.

The ALX is perhaps more critical today than during its first aborted launch. The current economic crisis may throw millions out of work. It will permanently destroy millions of jobs. The new jobs created to replace those lost will require new and different skills. Just as a massive job bank helps to ease the connection between employers and jobs seekers; a massive learning exchange will ease the connection between workers and the new skills they will need to learn.

Recreating America's Learning Exchange

Because much of the structure needs to be resurrected and updated rather than invented from scratch, the task of re-launching the ALX can be compressed into as little as 6 months. We are also fortunate in being able to draw from the experience of the UK Learn Direct model. Unlike in its original incarnation, we believe that the new ALX should be lead by the Department of Education in close coordination with the Labor Department to maintain its close tie to jobs. There also needs to be strong connections to Defense (various training efforts using the civilian higher education network, the Advanced Distributive Learning initiative, and civilian licensing and certification programs), and Veterans Affairs (GI Bill). This shift to an Education lead would parallel the leadership structure in the UK. It also recognizes the critical role that community colleges and vocational/technical education programs need to play in the new exchange.

Cooperation should be sought from the various associations representing various aspect of higher education many of whom were involved in the initial ALX effort in the 1990s. In fact, the new ALX should be housed within one of the national higher education associations (e.g. American Council on Education -- ACE or American Association of Community Colleges -- AACC) and financed through an on-going Education Department grant. We note that unsolicited proposals to recreate ALX have been presented to both Labor and Education by a consortium led by the Minnesota State Colleges and Universities system and AACC.

Initial Steps

Because the effort is not starting from zero, the specific initial steps would include:

- A quick review of the old code to determine what can be used and what needs to be rebuilt;
- A quick review of the Learn Direct system to pull ideas;
- Development of an interim exchange that organizes data on the program level (and not at the course level) by pulling information from the IPEDS database maintained by the Department of Education;
- Integration of existing “consumer report” information from such leading edge States like Florida, North Carolina and Texas. Encouragement of similar systems in other States and development of a user review process that lets actual consumers post comments about courses and programs.
- Development and testing of tools to index the course content from the online course catalogs now maintained by virtually all post secondary educational institutions;
- Development and testing of tools to classify the course content using the already developed course/skill taxonomies (this effort will benefit from the work already done in building auto-coding tools to classify jobs or resumes into the SOC/O*NET occupational coding scheme);
- Development and testing of search widgets (easily insert applets) that can be deployed in any job bank or career exploration tool (and within the career management account) to allow users to find relevant training related to the job they are seeking; and
- Actual building of the course database through the indexing process

The ALX should be integrated with the two government funded systems --Career Information Network (www.acinet.org), the Service Locator (www.servicelocator.org) – and with the JobCentral/NASWA partnership (www.jobcentral.com). The core learning searches should be made widely available through web services. Because of the work that has already been done, the interim exchange could be operational within 120 days of grant. A fully functioning learning exchange with information on millions of courses would be possible within 9 months of the initial grant funding.

Lead Agency

As discussed above, the lead agency should be Education. The best vehicle for funding is likely to be the unsolicited proposal already in the hands of both Labor and Education. Funding that proposal would put the operation in the hands of the group that managed the initial development of the ALX in the 1990s and which has maintained some of the core technology and knowledge that was developed. Also as noted, there should be significant involvement in the design and application of the new ALX by Labor, Defense, and VA.

The DOD involvement is critical from a content standpoint. DOD, as part of its Advanced Distributive Learning (ADL) initiative, has created massive repositories of online and computer-based learning. Some of that content is classified; however, a large amount of it is high quality training developed to teach basic skills (e.g. reading for information, technical writing, math, general writing) and occupational skills (e.g. diesel engine repair, cost accounting, computer network installation). Much of the non-classified training was purchased in a way that gave the federal government a non-exclusive, perpetual public use license to the software. Systematically extracting the unclassified and civilian useful training from these repositories and adding it to the ALX collection will make “no cost” training available to millions of Americans.

Costs

The start up phase, from now until the full launch in 9 months, will cost an estimated \$3.5 million dollars including the costs for the initial hardware and software and the rapid development efforts. Those funds would include the cost of organizing the DOD databases so that the unclassified/public use license material can be made available.

The on-going operational and development costs should be in the range of \$3 million per year. This on-going funding would be sufficient to support both the extensive web services operation (similar to the jobs distribution approach taken by JobCentral) and search engine optimization (so that searches for training lead back into the ALX database). It would also include the operation of an open source learning management system (LMS) and an open source authoring tool (already developed by Labor). Part of the search engine optimization effort will

include the creation of a number of niche learning exchanges (e.g. Green Jobs Learning Exchange, Health Care Learning Exchange, etc.).

National Social and Human Services Locator

Background

For the most vulnerable Americans, success in the work place is often threatened by the inability to manage the other personal and family issues. A car that won't work, a child care arrangement that falls through, a problem at a child's school can both distract a worker and often make it impossible to hold onto a job. Much of the task of social workers and others in helping to facilitate a public assistance to work transition involves creating the appropriate package of social supports for the client. A significant amount of time is spent by these support personnel in locating the social and human services support needed by the client. Even middle class individuals, seeking to manage their own work/life balance, would be benefited by a database that made finding the right support easy.

The Labor Department has built the foundation of this type of database in its America's Service Locator site (www.servicelocator.org). The Labor site is funded through a grant to the Minnesota Department of Employment and Economic Development; that grant includes funding for the Career One Stop and America's Career Information Network. The site's database covers most employment and training related services. The site provides links to other government and community services but it does not incorporate them into the database and the search/mapping capability of the site.

The United Way has created a nearly national network of databases of local community and social services through 211 services (see www.211.org). Unlike the Labor Department approach which pulls the information into a single database with a common search interface, the 211 approach is very local and often heavily dependent on whether or not you know it exists.

Neither approach is optimized for search engines although Service Locator does much better than 211.

Expanding and Enhancing the Service Locator

The America's Service Locator site is a solid start but it needs to expand its database to include social and community services. It also needs to move away from a pure "voluntary update" approach for its information and incorporate the type of sophisticated indexing technology that is employed by JobCentral and is planned for the new America's Learning Exchange. The indexing approach will allow the creation of searchable database from the highly distributed 211 network. It may also locate additional service providers who are not part of the 211 network and who can be asked to join.

Beyond the database development, the search tools would need to be updated to include broader categories of services. There would also be a need to execute a search engine optimization strategy so that the comprehensive results available through the new Service Locator begin to come up in the first 5 or 6 results in a Google, Yahoo or Bing search.

Two additional search services would need to be created: API's (automated programming interfaces) so that the search could be incorporated easily into the career management account, job boards and counseling tools via web services, and service plan development tool that could be used by counselors and social workers.

The APIs would allow other sites to benefit from the information gathered by the new Service Locator without the need to replicate the database. They would expand the power and reach of the tool without the need to design hundreds of specialized sites. The linkage to thousands of "trusted" sites will also increase the ranking of the Service Locator's results in the search engine listings (a key part of a search engine optimization strategy). It is expected that these APIs will be incorporated into the career management account in all its variations.

The service plan tool would need to be developed in cooperation with counselors and social workers so that it would meet their needs. The tool would allow the social services professional to input the characteristics of the client and his/her service needs and then be returned search results that suggest a package of service providers (with several alternatives) who would meet the needs of the client. The tool would generate the referral letters and set up periodic follow-ups with the client and the service agencies to monitor the operation of the plan. It is expected that

this service plan tool will be built into the “counselor” version of the career management account and be used heavily by the career scouts described in detail later.

While the API/web services approach will be a part of the effort, there also need to be a formal search engine optimization strategy that increases the likelihood that users of Google, Yahoo, Bing and Ask will find appropriate and relevant results when they seek out local social and community services.

Lead Agency

It would make sense to have Labor maintain its lead in terms of on-going development and operation of the Service Locator. Basic funding would continue to come through the existing grant channel. HHS, Agriculture, HUD, Education, and VA should be asked to collaborate in the development of the service plan tool and contribute to the cost of development and implementation. As appropriate, these agencies could contribute funds to the expansion of the database and functionality of the tool.

Costs

The current Labor Department grant for managing Service Locator is \$1 million annually. To add the necessary hardware and programming to allow for the APIs/web services would cost \$300,000 plus about \$75,000 in additional annual operating costs. To bring the broader social/community services items into the database would require about \$1.25 million to build and test the indexing systems and to build or license the software that would parse the incoming data, assign XML tags to key data elements and properly categorize the items for search. Building the “service plan” tool would cost an estimated \$1 million with a substantial fraction of that cost coming from the effort to build the specification so that it would be useful to a large number of social services professionals. The expanded social services capacity would double the annual maintenance and operations costs to \$2 million.

National Career Information Network

Background

The Career Information Network was created in the 1990s and it is the only surviving element of the ambitious America’s Career Kit suite of sites that included America’s Job Bank, Talent Bank and Learning Exchange. America’s Career Information Network (www.acinet.org) is housed within the Labor Department’s Career One Stop web portal (www.careeronestop.org). ACINET includes a vast array of career information drawn from government and private sources. Without it, searching for career information on the web would be much like searching for social services providers without the benefit of even the 211 system.

It contains many of the elements that will eventually be organized in a career management account as stand alone modules. A partial list of those modules includes:

- Nationwide wage data generated by the BLS occupational employment statistics program (the system allows for comparisons between different occupations in a single area – state or metro – and the comparison of the same occupation’s wages in up to 10 metro areas in the US.
- National and state industry and occupational projections generated by BLS and the State labor market information units.
- A searchable database of licensed occupations throughout the US with summaries of the licensing requirements and links to the appropriate State licensing agencies.
- A scholarship and financial aid database and search tool.
- A training program database
- A career resource library organized by occupation and industry drawing together thousands of web-based resources from public and private sources.
- A skills profiler and gap analysis tool that allows individuals to determine what jobs their current skill sets allow that to qualify for and what, if any, gaps exist.
- Occupation and industry videos that explain what doing a job or working in a particular industry is like.

- A searchable database of employers organized by industries and by the types of occupations they normally employ.

The modules, while standalone, are interlinked within the site to suggest other paths of information that might be pursued. For example, finding an occupation through a search that seeks out the highest paying occupations requiring some college will present a list of occupations ranked by salary. However, clicking on any occupation in the list will generate an occupational profile that contains descriptive material drawn from O*NET, career videos, wage data, long-term projections, a list of related occupations and links to elements of the career resource library.

The Career Information Network is a designation site (you have to go to the site to get the information). It is heavily linked too both at the home page level and to specific results pages throughout the site. To make the site more accessible, the same type of API/web services development recommended for the Service Locator would need to be done. There is also a need to create contextual links to the national labor exchange (a find a job button as part of the career information display) and to the eventual America's Learning Exchange. There will also need to be provisions made for the display of data developed by the Real Time LMI effort. Also, as noted above, much of the content with the Career Information Network will be the foundation for the Career Management Account and robust API/web services structures will be needed to make the information easily accessible.

Lead Agency

As with the Service Locator, it would make sense to have Labor maintain its lead in terms of on-going development and operation of the Career Information site. Basic funding would continue to come through the existing grant channel.

Costs

The current Labor Department grant for managing the Career Information Network is \$3.5 million annually. To add the necessary hardware and programming to allow for the APIs/web services would cost \$300,000 plus about \$75,000 in additional annual operating costs. To add the job and training search links would cost under \$100,000. Adding the Real Time LMI data to the collection and fully integrating with the rest of the data in the site will cost \$500,000 to develop and an additional \$200,000 annually to maintain. In addition to the new development work, \$1 million should be added to the base annual grant to allow for continuous improvements to the site.

Creating a Real Time Labor Market Information System

Nearly all of the labor market information (LMI) we have originates with government collected data. Look behind the fancy charts, the computer models, the impressive displays and you will always find government produced data as the foundation. The one exception has been the most basic pieces of labor market information job openings and job candidates. With the advent of the Internet, job openings which had been on paper lists now can be found 24/7 with a few keywords and mouse clicks. By tradition, finding job openings on the Internet has been free to job seekers. It is also possible to find job candidates (resumes) on the Internet but most of them are organized behind the curtain and require the payment of a fee to a job board (with the notable exceptions of the publicly funded labor exchanges run by States and most of the Craigslist system).

Until recently, the answers to the questions of “where are the jobs?” and “where are the candidates?” would be a simple list of the openings or resumes. We have begun to see the emergence of more “statistical” answers to those questions in the form of trend reports on labor demand and labor supply created by analyzing the flow of information over time from the job boards and resume banks. Most of these statistics are emerging from the private sector although there are some examples of State research agencies producing “real time” LMI. In the case of the States and some of the private sector players, the information is provided free; however, in the private sector “free” is nearly always a teaser to premium service for a fee. The most fully developed real time LMI system in the market today is Help Wanted Online produced by the Conference Board which includes a reasonably unduplicated database of Internet job openings over that last 4 years with work done already to create a longitudinal time series from the database.

Ultimately, this real time information is not free to produce (although ultimately not very expensive) and will require either a fee base or government funding or both.

For the public sector and for those who are concerned about ensuring that disadvantaged individuals and small businesses do not become information have-nots, the question of who pays and how access to the emerging real time LMI system is managed is a serious one. Steps taken now could lock in choices for a number of years. Such steps should be taken with an eye toward now and an eye toward the future.

The first step in the process is to look at the emerging actors in the field and to look at the business models they are deploying to create the sustained revenue needed to maintain and grow their operations. The next step will be to ask what role, if any, should the private sector play in the development and finance of the emerging system to ensure that the public and cash poor populations can have equitable access.

Business Models

The Core Business Models

Most potential actors in the field of real time LMI come to it not as a core business but as a spin off from their core business. Put simply, they are collecting all of the jobs or resumes to “sell” them directly to employers or job seekers. (In the case of job seekers, looking may be free” if you do not mind the ads that are a feature of virtually all the sites.) All the job boards (Monster, Career Builder, Hot Jobs, Dice, etc.) use the model of employers paying (and job seekers enduring ads). The job consolidation sites have more varied models that involve employer subscriptions (JobCentral), job seeker ads and premium placements for employers (Indeed, Simply Hired) or institutional subscriptions (Employ On) where usually public agencies pay for access to the consolidated job flow. There is one more model that of Wanted Technologies. Wanted Technologies, which powers the Conference Board’s Help Wanted Online system, has gathered the job demand (but no resume) data to provide sales and marketing intelligence to job boards (which employers are buying ads from which other boards).

With the exception of Employ On, all the models are ultimately “employer pay.” The commercial boards (Monster, etc.) tend to make the employer pay substantially. The job consolidators (Indeed, etc.) are seeking to have employers pay “premium placement fees” but generate at least some of their revenue from advertising (much of it paid by employers as well). JobCentral, which is organized as a non-profit, generates fees in the form of dues from its member companies. Since nearly all of the employers who are members of JobCentral are large employers with thousands of annual vacancies in multiple markets, the annual dues are usually less than 3% of what a year’s service on one of the commercial boards would cost.

The current recession is likely to have different impacts on the different players. The most severe impact is likely to be on the commercial job board segment because corporate spending on recruitment ads traditionally falls during a recession. A primary beneficiary of the effort on the part of corporations to economize might be JobCentral whose very low cost model may become increasingly attractive. Wanted Technologies is likely to maintain its revenue base because its primary customers (the job boards) cannot afford to disarm their sales staffs. Employ On which basically sells what others give away may find its public sector customers seeking to economize by using one of the “free” job consolidation services or switching to JobCentral because of its public sector connections through the State workforce agencies. The commercial job consolidators will find some of their “premium placement” revenue squeezed and may seek to move into the “subscription” model used by Employ On.

All of the entities are likely to see the real time LMI market as a new revenue source (with the exception of JobCentral where “sharing” its job flow is part of its business model).

Emerging Real Time LMI Business Models

Two primary models are emerging in the real time LMI market. The first is one where the organization sells the analysis and maintains control of the underlying data. The second is one where the organization sells access to the underlying data and gives away an analytic tool but that organization does not do the analysis.

The commercial job boards and the job consolidators appear to be pursuing the first model. In the case of the job boards, they are able to sell analysis of both demand (job flow) and supply (resume flow). In the case of the consolidators, it is simply demand information.

The second model is being pursued by Wanted Technologies and Employ On when they approach the public sector. When they approach the private sector, they are pursuing the first model of selling only the analysis and not the underlying data. In the public sector space, the underlying data is sold to State workforce agencies and college placement offices interested in expanding the opportunities available to its customers and the analytical tools are provided as a bonus. Subscriptions to the underlying data have not been cheap. Employ On has recently added a premium analysis tool based on the analytic capacity of Burning Glass Technologies which will allow for analysis of the job flow at the skill and knowledge requirements level.

The Public Sector's Buy, Build or Hybrid Decision

The public sector, which generates a critical element of the underlying data through the public workforce system, will be faced with a buy, build or hybrid decision on a real time LMI system. The recent "Green LMI" solicitation from the Department of Labor will be the forum where that decision will be made. Several of the consortia of States and individual States have included the licensing of real time job streams in their proposals. While "green" is only a small fraction of the overall economy, the purchase of the entire job flow will be needed in order to find "green." Also, most of the tools that will be created to answer the "green" questions (e.g. how much green demand exists, short term projections of green vacancies, what skills are required for green jobs) will also answer the same questions for any occupation. How the Employment and Training Administration (ETA) provides grant funds for real time "green" LMI will become the de facto public sector response to the overall real time LMI question. That decision, wrapped as it is within the constraints of the grant review process, should be made explicitly and not accidentally.

The Green LMI proposals present a fragmented picture of the decision that needs to be made. About half of the States in their proposals included funding for licensing the Conference Board's Help Wanted Online database. Before we move back to the discussion of the decision that ETA, as a proxy for the public sector, faces, it would be useful to sketch what an ideal real time system might include.

Operating Principles to Govern the Development and Operation of a Real Time LMI System

Ideally, any real time labor market information system should:

Database Content and Structure

- Have a comprehensive and representative set of job vacancy notices (demand data) representing all occupations in the economy, all regions in the country, and all industries that is –
 - Updated on daily or nearly daily basis so that all potential vacancies are found;
 - Longitudinal (with 3 or more years of comparable data);
 - Purged of duplicates (either by avoiding duplicates in the way the job vacancies or by applying appropriate duplicate spotting software to the database);
 - Coded with occupational (SOC/O*NET), industry (NAICS), and geographic (Zip or FIPS) codes;
 - Where the individual job vacancies have been parsed and specific tags assigned to skills, knowledge, education and experience requirements and to job duties and other requirements;
 - Seasonally adjusted to allow for appropriate month to month comparisons; and
 - Reviewed and organized so that statistically valid inferences can be made from an analysis of the data.
- Not have significant restrictions on usage imposed by the way the demand data is assembled.
 - Users should be free to publish results of research or analysis without limits on the level of detail provided (since the demand data itself is collected from open sources)
 - Coding that is applied to the database should be available to any user.
 - Developers should be free to develop consumer products based on the data using an O*NET-like free licensing model. Such licenses could include some restrictions to protect the value-added (de-

- duplication, seasonal adjustment and organization for statistically valid inferences) by the vendor if it is also selling the same product commercially.
- To the extent possible, have a comprehensive set of resumes (supply data) representing all occupations in the economy, all regions in the country, and all industries. The research resume database may need to have more significant restrictions on the use of the micro data because of the concerns about the privacy of the individuals represented in the resumes. However, such concerns may be addressed by restricting the research resume database to only resumes with all contact information removed and with employers generalized (e.g. manufacturing firm instead of 3M). The general location of the job seeker (e.g., zip code, MSA) would still be maintained to allow for geographic supply and demand analysis.

Standard Reports

- Issue a standard set of monthly, quarterly and annual reports on:
 - Demand trends overall, by geography, by industry, and by occupation
 - Skill/education requirements (and trends in those requirements) by occupation, and, if sufficient data is available, by occupation and geography and occupation and industry.
 - Projections of expected vacancies on a short-term (6-12 months) basis using the trend analysis within the history file to drive the projections.
- Make the elements of the reports available for download so that others can incorporate the results with other data sets and issue their own value added reports. Downloads should be available in multiple formats including those compatible with both proprietary and open source software. They should be available as RSS feeds.
- Develop and make available through web services trend data that can be incorporated into job boards, career information systems, and counseling tools to facilitate informed decision making by students, job seekers and employers.

Ownership and Control

- Be “open access and open source” to the greatest extent possible:
 - The database should not become a “government system of records” subject to the Privacy Act, Paperwork Reduction Act or Freedom of Information Act.
 - There should be a transparent process that sets rules for access to the database, and disclosure and source credit rules.
 - The data sources used to construct the unduplicated demand data should be disclosed so that users and researchers understand clearly the source of the data.
 - Methodology for determining duplication should be disclosed. The accuracy of the de-duplication methodology should be periodically and independently verified and the results published.
 - Methodology for assigning occupational, geographic and industry codes should be disclosed and to the extent possible the accuracy of the coding should be independently verified and the results published.
 - There should be a “public” research environment created to allow State and federal agencies as well as academic researchers access to the full national databases.
 - Underlying micro data (job vacancy details) should be made available to researchers (government and private sector) with as few restrictions as possible consistent with maintaining the on-going flow of new job information into the system.
 - There should be minimal charges for use of the database and the analytical tools included in the research environment. Charges should seek to recover the costs only including costs of collecting and maintaining the database. Full recovery of the costs may not be possible. Some users (Federal and State governments) should have the costs of their use paid for by a base grant from the Federal government to organization managing the research environment.
 - The “research environment” should include tools that code the jobs, parse the job details, and it should provide a standard set of statistical analysis tools.
 - To the extent possible, access to some or all of the data products should be free (publicly supported) so that access by vulnerable populations and relatively under-resourced institutions will not be denied.
- Control should be with a not-for-profit entity with a stated purpose of improving labor market efficiency and improving labor market outcomes for employers and individuals. That entity must modify its charter so that it conforms to the “open access and open source” ethos. A consortia of States might also play this “public” guardian role.
- External funding for the entity should be from government or foundation sources that are willing to buy into the operating principles and support the open access, open source” approach.
- Development of “value added” products and services by private and public sector entities will be encouraged. The O*NET licensing model may be the appropriate method where the O*NET database is licensed (at no charge) with only the requirements for attribution (O*NET In It) and registration.

Factors in the Public Sector Decision

The Lease or Build the Underlying Data Stream

The public sector is faced with a lease or build decision in terms of creating the underlying database of job openings. It has considerable leverage because it generates a critical element of the underlying demand data through the partnership between the public workforce system and the employers of JobCentral. Its other point of leverage is the large checkbook it holds in the form of the “yet to be announced” Green LMI grants.

Individual States are considering “leasing” the database produced by the Conference Board/Wanted Technology. A number of States already lease the job flow from Employ On or from other job consolidation services. If the subscriptions/leases were done by each State individually, the cost for covering the country completely would be between \$5-10 million annually. That amount is many times that cost we estimate of creating the analysis database starting from the base already collected by JobCentral. However, a major consideration in the “lease” or build decision will be whether or not a history file – job vacancies collected over the last 3 years is critical. And if it is critical, how should the purchase of that data be valued in terms of costs.

Value the Pre-Built Systems Offer

Those who have been spidering jobs for a while will have a significant history file. With the notable exception of the Wanted Technologies/Conference Board Help Wanted Online database, that history file is just a very large database. In the case of Help Wanted Online, the database has been enhanced and modified so that it is a true longitudinal time series of job vacancies where a significant fraction of the duplicates have already been removed.

These pre-built systems offer the value of “now” because they already exist. They also offer the value of comprehensiveness because they spider thousands of corporate job sites, general purpose and niche job boards and Craigslist. The comprehensiveness is both a value and a problem since duplicates of the same vacancy may appear on 10 or 20 different sites or be reposted on the same sites to keep them coming up on the top of a search results page. For a job seeker, the duplication is not an issue (they probably never see the duplicate because it is buried on page 234 of the search results). For LMI analysis it is a potentially fatal flaw because the existence of duplicates will provide a false sense of the level of demand.

Likely Constraints Presented by the Pre-Built Systems

Most of the pre-built systems will be constrained by two factors: 1) the other, and often primary, markets for which the job vacancy collection was done, and 2) fear that a completely accessible database of job vacancies will allow others to reverse engineer the system and produce it at a lower price.

Some of those constraints will come in the form of limitations on access to the historic database. Some vendors may allow access to the historic database only through their analytic tools and will not permit the database to be downloaded. Some vendors will place restrictions on the level of detail that can be published (e.g. 2 digit occupations but not six digit occupations). Some may provide the micro data only every month or quarter limiting the usefulness of the data as “real time” information source. Some may only lease the micro data to the public requiring that it be returned at the end of the lease period. Some will limit what can be done with the database to prevent their basic markets from being compromised (in much the same way InfoUSA constrains how its employer listings can be displayed to preserve its core list selling business).

Some of these constraints are not critical; however, some will reduce the value of the real time information system substantially and in some cases create a world of information haves and have-nots.

Some of the constraints can be overcome by either the right price or a long-term agreement or some combination of both. However, the public is in the weakest position if there is a sense that it only has one option. Having a competition between two or three players is critical if the public is to get a fair price and the right kind of access to the data.

Value of a Public System Built on a JobCentral Foundation

Job Central already indexes or “spiders” jobs from 3,500 corporate sites (which continue to grow) and uploads jobs from 48 of the States (with the number of jobs providing the upload continuing to grow). The jobs from the State systems are a nearly indispensable element of any valid real time data system because they cover a whole set of jobs and businesses not reached by the commercial job boards. Craigslist does cover some of the same small and medium sized space but the Craigslist approach to posting (reposting of ads is needed to keep them visible) and the nature of the posts (no pre-screening for valid employers and a mix of small jobs – trim the hedges – and regular full time jobs – work for ABC Software as a programmer) adds some special issues not found in the job postings from the State systems that are part of JobCentral. The Dot Jobs effort now being made by JobCentral has the potential to substantially increase the number of employers contributing their jobs directly to JobCentral. That effort has the potential of increasing the fraction of the visible unduplicated jobs represented by JobCentral (now at about 20%) to 50% or more.

Enhancing that current job stream to make it more complete would require the indexing or uploading of jobs from perhaps 750-1,000 additional sites. The largest of those sites would be Craigslist. The additional sites would also include a number of regional (e.g. Local Job Network, Beyond.com), industry/occupational niche sites (e.g. Dice for technology, PMI Career Headquarters for project management, etc.) and newspaper sites. It may

include major commercial boards like Career Builder, Hot Jobs or Monster but they may be found to be duplicative of the JobCentral or niche sites.

The marginal cost of creating the enhanced on-going stream would be less than \$1,000,000 annually. (Those costs would shrink over time as the number of sites needing to be indexed declines.) That would include the costs of doing the actual indexing or uploading, cleaning the stream of duplicates, maintaining its integrity as a time series, and adding O*NET and industry codes. There would be additional costs for the parsing/tagging of the jobs in the database so that analysis of skills, knowledge, education and other requirements can be done; however, those costs would exist whether or not the database is purchased or built. For the public workforce system, the savings from not needing to purchase commercial indexing services (which many States, Webs and community colleges already do) would be substantial -- many times the costs of doing it once for the whole country..

Beyond the likely cost advantage of building will be the “control” advantage. The only constraints on the use of the data will be the one’s the consortium imposes on itself. There will be no need to consult the license agreement to see if this new product or service could be created without violating the terms. Control is also critical to maintaining the time series and statistical integrity of the database. With any licensed product, when a new job source is added or subtracted may not be known. Knowing and controlling what goes into the database is critical.

Likely Constraints Presented by the Public Built Systems

The lack of a history file is a constraint on the analysis that could be done by the public built system. Overtime that constraint would disappear; however, without a history file, the analysis of the job movements during the recent recession would be lost.

To allow for a fair comparison of the two options, the cost of creating the historical database would need to be factored in. The history file from America’s Job Bank would cover the period from June 30, 2007 backward. The State of New York may have saved the historic files. The gap between when the “current” enhanced indexing begins and July 1, 2007 would need to be filled by purchasing the data from one of the job consolidation sites (Indeed, Simply Hired, Employ on or Wanted Technology). We have estimated the cost of filling the gap and integrating the historical file into the current file at between \$3 million with another million required to de-duplicate the data and put it into a usable longitudinal form. An important advantage of creating the historical file is the ability of the public sector to make the series of inclusion and exclusion decisions for the time series. Those decisions would need to be delayed without a history file.

Another potential constraint on the “build” option is the question of speed. The Conference Board/Wanted Technology system is available now. Similar systems from Employ On, EMSI/Indeed, and Geographic Solutions are coming to market or are already there. Six months ago, when the Conference Board/Wanted Technologies system was alone in the field, the “purchase” of that system might have been justified as a sole source. Now, there would need to be a competition which would add months to the process. Because the “build” decision is created on the foundation of the JobCentral/NASWA partnership which is inherently unique, there would not need to be a competition. JobCentral could use its own staff or engage one of its existing partners to build and maintain the enhanced data stream with that cost financed through one or more of the State “green LMI” consortia.

A Hybrid Option for Obtaining the Job Stream

Depending on the price and terms offered by one of the existing vendors (Conference Board, Employ On, Geographic Solutions, or EMSI/Indeed), a third option could be considered that would include the following elements:

- Purchase (through a consortium run competition) of the national historic micro data and the on-going data stream for the 18 months (term of the Green LMI grants) with the option to add additional years to the purchase of the on-going data stream at a set price.
- Financing of a pilot with the JobCentral/NLX to create its own enhanced indexing capacity as a counter weight to the pure purchase option.

The running of the buy and build options simultaneously would help to shape the competition for the purchase. The out-year costs would be constrained by the clear knowledge that the exercise of the option years would depend on

their cost being competitive with the JobCentral/NLX pilot. The cost of the historic file and the first 18 months of new data would be constrained by the competition between several vendors.

It would be important that the specifications for the competition (what would be bought) would mirror those describing the “ideal” database discussed earlier. New Jersey has already run such a competition and their experience could be used to guide (and expedite) this new national competition.

Building the Research Environment

Getting the data is just a third of the equation. The next third is the creation of a “public” research environment that will allow the federal government (BLS, Census, White House National Economic Council, Federal Reserve), State governments (LMI, economic development), and academic researchers access to the demand data stream. As noted in the earlier discussion, this research environment would have several components:

- A version of the database with the words and phrases indexed to allow Google-style searches.
- A version of the database which has been parsed and tagged using HRXML the international standard for human resource related analysis.
- Statistical and other analytical tools to facilitate analysis
- Sufficient hardware to handle large data and computational demands from individual research projects as well as the base level demand created by the production of the standard reports (the 3rd fraction).
- A structure to approve research proposals and monitor adherence to the privacy/disclosure rules.
- A steering committee that would set policy and prices.

The Federal government should finance the initial construction of the research environment. As part of the Green LMI grants, ETA will be asked to finance perhaps 20-50 such environments. One national environment would be preferable for both economies of scale issues and because most research will not stop at State or regional lines. Also, some trends (e.g. changes in the skill requirements in green jobs on in most individual occupations) may only become apparent when the full national database is analyzed because no single State or region has enough job flow in a narrow occupational niche to allow for proper analysis.

The Federal government (probably a combination of Labor, Education and Commerce) should finance the major portion of the on-going operation of the research environment and the production of the standard reports. For that support, federal and State agencies would be given “free” access to the research environment. For that support, the standard reports and data feeds would be made available to the public at no cost.

The balance of the operating costs, to support the use of the research environment by non-government users, should be covered by fees charges to the researchers or to vendors who desire to create value added products (described in the 3rd fraction) but who require a specialized run of the data to be done.

Building Standard Reports

As we noted above in the discussion of the ideal system, there should be a set of standard reports produced by the real time system on a periodic basis. Producing a set of high quality, consistent reports would create an information foundation for all users of the system. As also noted in the above discussion, those “reports” should be made available in traditional ways (e.g., website display, press releases or other publications) but also in the ways of web 2.0 (e.g., RSS feeds, web services, widgets or APIs) so that they can be easily incorporated into various other media (e.g. state and private job boards, WIB and community college websites, counseling tools, etc.).

Again, ETA will be asked to finance the creation of hundreds of different versions of these “standard” reports as part of the Green LMI grants. (It is useful to remember that most “green” real time reports will of necessity be based on analysis that would apply to any occupation so that even though the ETA funding is “green-focused” it will in fact cover everything.) For economies of scale, it would be important that ETA (Labor) finance a common core of analysis and reports and then permit States or consortia to build customized efforts on that foundation. While the package of standard reports is designed to cover all the basic workforce/education requirements, it may be useful for Education (for workforce focused community college programs) and Commerce (for economic development focused reports) to consider funding their own standard reports through the same national report structure.

The government investment in this real time system can be multiplied by allowing private vendors to build value added products on top of the government produced data. The model used by ETA’s O*NET is a useful one to

parallel. The government produces the underlying occupational data and also produces several free tools (some web-based like O*NET online and some downloadable like the Interest Profiler). It also permits the full O*NET database to be downloaded and incorporated into any private sector product provided a license is signed (it is a no cost license) and the user agrees to credit O*NET (“O*NET in it” logo).

For the real time system, there will be three items that might be “licensed” in the same way. First, the raw job feed itself is a valuable tool. A truly “free” license of this real time data feed would likely be possible only in the pure “build” option since any of the “buy” vendors would be only able to sell it once and then have the government “give” it away to everyone else. That data feed would be valuable for a number of States that now purchase spidered feeds to supplement their State Job Banks and a number of higher education institutions and workforce boards that do the same.

The second item to be licensed will be the “standard reports” particular those made available through Web 2.0 vehicles. Since part of the goal for the real time system is the creation of a more informed labor market, encouragement of this use of the data is critical. These licenses would be “free” with appropriate credit given.

The third use will be private vendors who wish to create niche products that need to go beyond what is available from the standard report feeds. Since those products will require the creation of special reports within the research environment, they should be handled in a two step process. The “research” request needed to produce the data for the private vendor product should be handled in the same way that any research request would be handled. The same “use” fees would be applied. In the case of this type of research which would be indefinite, the “use” fee would involve two parts: an initial set up fee and a recurring processing fee. The specialized “feed” that will be produced by the customized analysis and report would be licensed (at no additional charge) the same way that the standard feeds would be.

Lead Agency

The Department of Labor has already taken the lead, if only accidentally, through its Green Jobs Labor Market information Grant solicitation. As noted above, Labor could and should use this opportunity to create a national system that covers all jobs (not just green ones) and all States (not just States that win the competition). Both Education and Commerce, on behalf of the organizations and institutions they fund, have an interest in making sure the national system develops in a way that data is made available to their constituencies. They would share the interest in making sure that a level playing field was created and that no block of information have-nots is created.

Costs

It would make sense to price the Hybrid option for the creation of the underlying database of jobs and to price the research environment and standard report structure separately.

Purchasing the historical database and on-going access to the complete national for the next 18 months would cost an estimated \$5 million. The cost of the pilot to expand the JobCentral database through the indexing (and de-duplicating) of up to 1,000 new web sites would cost approximately \$1 million. Approximately \$300,000 in hardware would be needed to store the data initially with \$100,000 in additional or replacement hardware added each year. The hardware will cost about \$90,000 per year to host.

The cost of the research environment would be \$4.27 million to start up and then \$4.15 to run each year thereafter. That would include \$2 million in analysis software (tools for parsing the job and resume flows and tagging various elements for future analysis, standard “Google” indexing of the database to allow for keyword and fielded searches, statistical analysis software, etc.). It would include a staff of 3 database administrators to manage the various analysis environments, 2 computer systems professionals and 2 support staff to manage the operations of standard and ad hoc production runs on the databases, 3 research professionals and 2 clerical staff to manage the research requests, and one overall administrator and executive assistant to manage the entire operation. The overall staff costs would be \$1.95 million annually. In addition, there would be an initial investment of \$200,000 in hardware and \$75,000 per year in additional or replacement hardware. The annual hosting and bandwidth charges would be \$125,000.

The standard report structure would take about \$1.7 million to build and about \$500,000 to run each year thereafter.

The start up costs for the real time system would be \$12.4 million in total. The annual operating costs would be between \$6-7.5 million. The variation would be the costs of purchasing (or building) the on-going data stream.

National Longitudinal Analysis System

Background

On two separate tracks, the federal government has been building two huge longitudinal databases: one with data on everyone who works in America, the other on everyone who is being educated in America. The employment information has been gathered into a single national database through a cooperative effort between the Census Bureau and the States (Census Longitudinal Employment and Household Dynamics -- <http://lehd.did.census.gov/led/>). The educational information has been generated through a massive grant program from Education to the States including \$250 million in grant contained in the ARRA (National Center for Education Statistics -- <http://nces.ed.gov/programs/slds/>). The grants encourage linkage between the education and employment data at the State level but there is no specific encouragement for interstate linkages. There are currently no plans to bring those two longitudinal streams together on a national level. That would be a tragic mistake. The potential knowledge that could be gained by linking some of the micro-data from the two systems would be significant.

We would be able to see the impact of different levels on income over time in a much more granular way. Because the educational attainment data will contain a much richer set of detail about the type of education obtained, we will not be limited to the broader categories of “some college,” associate degree, etc. We will be able to understand the differential impact of one-year certificate as an electrical engineering technician and a bachelor’s degree with a major in English. We will be able to see the industry distribution of those with bachelor’s degrees in history after 1 year, 5 years and 10 years. We will be able to trace the reemployment patterns of individuals after a large scale layoff based on prior income levels and details level of educational attainment. We would be able to see what types of educational attainment prepare individuals better for self-employment and what is the long-term pattern of wage/salary versus self-employment based on education.

Linking the Data and Creating a Research Environment

The Census LED (Local Employment Dynamics) program already links a number of large administrative data sets including State level wage records, federal employment records, self-employment tax records, and demographic information. It has already linked the data sets across State lines. It has developed sophisticated tools for displaying its information on maps. And it is working with several agencies (e.g. Labor, HHS) to link program participation data. Census has built the capacity and the expertise to handle and process the literally hundreds of millions of individual records each quarter and to generate a useful and very powerful research database from the effort.

The National Center for Education Statistics also has a long history with longitudinal studies and the creation of national data sets. However, most of its national data is developed from summary reports delivered to it by States or individual educational institutions. NCES’s experience in handling massive (several billion individual records) micro-data systems is more limited than Census.

While Census is probably the logical home for the combined micro-data set, NCES is an indispensable partner because of the requirements of FERPA (Family Education Rights and Privacy Act). The NCES grant program funded by the ARRA is also the potential funding source for all the necessary start up money. The start up funds would be needed to test and standardize the information sent up from State education agencies and to develop on-going quality control efforts. They would also be needed to expand the hardware at Census so that it can handle the additional data and be able to accommodate the greatly research demands. Census already has a network of nine research data centers (see <http://www.ces.census.gov/index.php/ces/researchlocations>) that can be used by academic and other

researchers to access micro-data from any Census program including LED. The addition of the education data is likely to significantly increase the demand on these centers and will require the addition of representatives from Education in those centers where educational micro-data will be used because of FERPA.

Lead Agency

We believe that Census should lead this effort in direct partnership with Education.

Costs

Like with the “real time” data, it will be useful to think about the structure of the effort in three parts – database, research environment, and standard reports.

We estimate that after the database start up costs will be about \$5 million to cover the work with each of the States as they add their data and establish quality control routines. (Note: this is only the federal level costs and would not include the State level costs. Also, it is useful to note that is a small fraction of the grant funds made available for this program from ARRA.) The on-going federal level costs would be about \$2.5 million per year to cover the costs of processing the education data and the necessary hardware.

The nine Census Research Data Centers (RDC) are already technically robust enough to handle this new data set. However, the new research potential of these merged data sets is likely to create an increase in demand that could overwhelm the available research time available. The centers are also heavily concentrated on the coast with 5 on the east coast and 2 on the west coast. The mid section of the country is covered by the two remaining centers in Chicago and Ann Arbor (MI). It would be useful for Census and NCES to jointly fund the creation 3-4 additional centers. The creation of the additional physical centers is more important in the case of the Census/Education data sets because Census rules (designed to preserve data privacy) only allow access to the micro-data from one of the physical centers.

The creation of each new RDC would require approximately \$1 million in start up funds to cover the establishment of the secure research space with the necessary equipment. The RDCs are usually sponsored by one or more universities who will then house the physical location. They are designed to become self-sustaining over time with dues from the participating universities and usage charges from non-member researchers covering the operation costs.

Some of the pressure on the centers can be relieved by having a permanent set of researchers stationed at one or more of the RDCs to produce a standard set of reports for the nation and for each participating State. Such standard reports would include:

- Short (1 year), medium (5 years) and long-term (10 years) economic value of various degrees, majors, certificates and even clusters of courses. Economic value would be measured using annual income and sustained participation in the labor market.
- Short, medium and long-term distribution of various degrees, majors, and certificates within industries.
- State reports including:
 - Performance reports (economic value) on each reporting institution

- Migration reports (short, medium and long-term) for graduates (those obtaining degrees or certificates) showing where they are living or working now (for the State as a whole, by type of program of the graduate, and by reporting institution)

In addition to these standard and periodic reports, the ability to look at educational breakdowns (in broad categories) should be added to the tools already available on the Census LED site (QWI – quarterly workforce indicators, Industry Focus, and On the Map). Presently, data trends can be cross tabbed by age, gender, industry and geography. The marrying of the education data stream will also permit the data to be cross-tabbed by educational attainment levels. Adding education data to On the Map will allow commuting patterns to be isolated not only by income level but also by levels of education attainment. Because of the level of detail that would exist on types of educational attainment, economic development agencies would be able to produce interesting talent maps of their regions.

The cost of the creating these standard reports would be similar to the effort for the real time data. We estimate that the initial reports would take about \$3 million to program (higher because of the likely variation in the State level reports). They would then take about \$1 million per year to run (staff time and the costs of the dedicated servers that would be needed).

Critical Connection Elements

The connection elements are designed to bring the content generated by the 5 elements described above to the maximum number of individuals and businesses possible.

Career Management Accounts (CMA)

Background

The content described in the previous contains all the information that individuals and employers might need to successfully navigate the labor market and to build individual and corporate human capital. However, the sheer amount of information can be overwhelming unless it is organized by a set of tools that allows the individual to manage his/her own career development. The tool kit itself might have a number of faces depending on the stage of life the individual is in (e.g., student, recent graduate, mid-career professional, military veteran leaving active duty, recently laid off worker, person making employment re-entry after a long-term illness, etc.). The basic tools for the individual could also have “faces” that allow counselors and other workforce professional to gain access, with the individual’s permission, to aspects of the information stored in the account and to provide targeted assistance. Employers could also build an internal talent development and management system using the career management account as the core.

The career management account is a way for individuals to become career entrepreneurs – taking ownership of their information and their on-going skill development. The accounts themselves will organize the critical content in a logical way so that the user is able to find the correct career path for him/herself and to build an action plan to achieve that objective.

Key Elements in the CMA

The account would be organized into several interconnected modules that draw information from government and private sources, including a number of those outlined above.

- A registration module that would collect basic contact information from the individual. The module would collect minimal information from the user, sufficient to allow for contact. A valid e-mail address would be required since much of the communication in the account would be electronic. The registration module would be expanded when the CMA was operating in program or employer modes.
- A career exploration and labor market information module which organizes information from the National Career Information Network, the Real Time LMI system, the National Longitudinal Database system. The goal of the module is to give the individual several ways to look for a potential new occupation and to set career targets.
 - O*NET-provided Assessments (interest and values profilers)
 - O*NET-derived skills profiler
 - Top 25 lists (occupations with the most openings, fastest growth, highest pay, highest employment for any given education level)
 - Free form exploration of any occupation
 - Career path analysis tools with information drawn from the longitudinal database system and analysis of millions of resumes (looking at the career transitions that took place).
 - Transferrable skills analysis tools that help individuals who have been laid off decide on other career options.
 - The resulting lists will produce a complete occupational profile (including all the information from ACINET and information generated through the real time and longitudinal standard reports) and allow the user to select one or more occupations as a potential “career target.”
- A career target management module that allows the user to select one or more occupation as either an immediate or a stretch (eventual) career target and then to create an action plan to get there.
 - For each career target make available --

- The occupational profile including standard requirements and related information on wages, projected employment and career library resources.
 - Current vacancies in the occupation for the individual's designated labor market (based on his/her home zip code) from the real time analysis tool
 - Current and projected demand for the occupation drawn from the real time standard reports and the BLS generated long-term projections.
 - Information on the career path to and from the occupation
 - What training is available (link to the Learning Exchange) and what certifications are associated with the occupation
 - Tools for analyzing the gap between the individual's current skills, knowledge, abilities, education and experiences and those typically required for the targeted career or a specific job.
 - The ability to create, modify and track a personal action plan for the targeted career based on the gap analysis and training found.
 - Ability to add or delete targets.
- A job search module that is based on the National Labor Exchange and allows for the user to set up several job scouts (that will e-mail the user new job openings based on his/her established search criteria)
 - Job search using keywords
 - Job search using an O*NET based menu search
 - Job search using the individual's resume as the basis for job matching.
- A resume module
 - Allowing the individual to upload, create, edit and manage multiple resumes
 - Resume wizards that permit assist the individual to create a better initial resume based on O*NET skill, knowledge, task and specific work activity statements. Special wizards can be created to assist special populations to create resumes. For veterans, the wizard might start with his/her electronic VMET (verified military experience and training) and use a military to civilian occupation translator to help create a solid civilian resume.
 - Resume analysis tools that allow the user to beef up the content of the internal work experience descriptions and determine the impact that such changes will have on the ranking of his/her resume by electronic resume search/sort programs used by many large businesses.
 - Resumes can be in stored, searchable or confidential modes. Confidential mode strips the resume of contact information and makes generic references to employers and occupations. Employers who find the resume in a confidential mode are only able to contact the candidate through a blind e-mail that allows the candidate to decide whether or not to respond.
 - Some resume elements (education, certifications, etc.) can be "verified" using tools built to for the original America's Learning Exchange.
- Public Profile Manager
 - Create one or more personal web pages that can be used to advertise your skills and experience. Pages can include a resume, work samples, references, videos, etc.
 - Select items from the individual's registration profile, career targets and action plans to share with individuals (e.g. counselors, pastors, etc.) or organizations (e.g. State job banks, local One Stop Career Centers, college career center, vocational rehabilitation programs). (Note: the organization managing the CMA's would publish APIs that would allow those developing software to support such individual professionals or helping organizations interface with the data contained in the CMA.)
 - Manage relationships with individuals and organizations from which assistance was sought.
- Learning and Financial Aid Search
 - Use an API from the Learning Exchange to generate searches of the course database

- Scholarship and financial aid information and searches adapted from ACINET
 - An open source learning management system that the individual can use to keep track of his/her progress through courses taken.
 - Tools to assist veterans and others in translating their work experience and training into college credit
 - Information on licenses and certifications
 - For Veterans, education program searches including information on which schools are participating in the Chapter 33 Yellow Ribbon program.
- Community and Social Services
 - Use API's from Service Locator to generate searches for workforce, social and community services.
 - Allow individuals to store links to particular services in their own "links" section.

The "individual" CMA will form the core of three other versions: a staff version, a program version, and an employer version.

The staff version would be built to serve the needs of counselors, social service agencies, workforce programs, and other government programs that had not redesigned their systems to take advantage of the APIs but still wished to use the functionality within the CMA. The staff version would allow the individual "owner" of the CMA to open a window on his/her account and given the staff person a password protected access to a portion of his/her account. Within the area in which "permission" is given, the "staff" would be able to act as a proxy for the owner – setting up suggested career targets, establishing job scouts, modifying the resume. The staff version would automatically record the proxy actions and e-mail the owner and the staff person with a summary of those actions. The owner would be free to turn off permissions at any time and terminate the relationship with the staff person.

The program version would be a pairing of the individual and staff versions of the CMA and would become the "job seeker/learner" account within the program's website. The program version would be built with modules that would allow the program to supplement the various data elements in the registration module and with basic case management tools. The system would be built in open source/open architecture to allow the "program" to build customized case management and reporting tools into the system.

The employer version would allow the employer to set up CMA's for several of his/her employees and then use the CMA structure to manage internal talent and talent/skill development. The employer module would allow the employer to input specific job descriptions that his/her worker could use as the basis career targets and action plans. This employer version would be designed to be used by small and medium sized employers who cannot afford enterprise level talent management systems but still want to take advantage of the sophistication available to the big companies.

Creating a National CMA Repository

The CMAs will be owned by the individuals who create them. Portions of them can be "loaned out" in the staff, program and employer versions; however, the individual owner of the account is still in control. To make that control effective, there needs to be a "trustee" that will hold the electronic records and serve as the long-term repository of the information. The "trustee" would need to establish terms of use that clearly establish who controls the information and what "permission to use" is given when the account is either created through a program or employer or the account is opened up to a professional through the staff version.

We believe that the trustee should be a dedicated 501 (c) (3) entity that is formed by the original grantee charged with creating the CMA structure. The parameters for the foundation should be included in the original grant agreement and the government should provide multi-year base funding for the foundation. That original grant should include a requirement that the foundation create a plan to be self-sustaining after 4 years. The approach to providing the on-going revenue will need to be consistent with the public purpose of the CMA and with the "ownership" of the accounts by the individuals who create them.

Lead Agency

There are two logical possible lead agencies: Labor or Education. Each has a large number of “customers” who should be given CMAs as part of their programs interaction with them. Labor workforce programs see in a normal year about 20 million individuals with the largest number of them flowing first through the unemployment insurance system. While it will Labor programs will “see” another 20 million individuals each year, there is substantial overlap year to year. Education programs (vocational and adult education, higher education loans and grants) will touch 10-11 million individuals directly and perhaps another 6-8 million indirectly (students enrolled in higher education institutions but not receiving direct financial assistance). There are approximately another 25-30 million individuals are out of school but still have outstanding loans. Approximately 3-4 million new individuals will receive federal financial aid each year.

In both cases, the business case for a CMA is solid. For Labor, the CMA would be introduced as part of the rapid reemployment system (described next) and would be part of the process that would save billions of dollars in unemployment benefit payments because of a quicker return to work. For Education, the CMA should become part of what comes with every Pell grant and every direct or guaranteed student loan. It should also be given to every participant in a Perkins vocational education program and every participant in an adult education program. The introduction of the career management account to every individual you gets a federal government direct or guaranteed student loan would help to ensure that they have solid career information and access to an on-going stream of jobs that would keep them employed post college and therefore more capable of repaying the student loans on time. Savings from reducing the default rate (now running about 7%) by as little as 1.5 percentage points would result in nearly \$2 billion in savings to the federal government.¹

Given the relative equality interests and the fact that Labor and Education are often seeing the same customer; it would make sense for them to share the lead agency responsibilities.

Costs

The full CMA suite will cost approximately \$11.25 million to develop and about \$6 million per year to operate. The development cost estimate includes:

- Establishment of the foundation and creation of the necessary advisory boards and rules of operation. (\$750,000)
- Creation of the overall individual account framework and integration of various government and private source information and tools. (\$3 million)
- Creation of the system for validating resume elements (certificates, transcripts, industry certifications) (\$1.5 million)
- Creation of the staff version (\$1 million)
- Creation of the program version (\$2 million)
- Creation of the employer version (\$2 million)
- Purchase of hardware to host the national repository (\$1 million)

The on-going operational costs would include:

- Foundation operations (\$600,000)
- Running the repository including help desk operations (\$1.9 million)
- Licensing of career tools software (\$2.5 million)
- On-going improvements and development (\$1 million)

Sustaining Revenue Options

¹ The savings from student loan defaults assumes approximately \$125 billion in loans outstanding and a reduction in the default rate (currently 7%) by 0.75% in year one and 1.5% in year two and beyond.

The on-going costs are relatively small. Having the unemployment insurance system (as part of rapid reemployment) and Education (as part of the fees for loan origination and Pell grant management) add \$0.25 to the costs for each user would cover the entire operational costs.

Rapid Employment (Reemployment) System

Summary

Rapid reemployment initiative to assist those recently laid-off:

- Resume building and job matching as part of the initial application for UI benefits whether the claim is filed online or over the phone;
- New job leads every time the individual seeks another unemployment check (online or through an IVR);
- Aggressive outreach to find new job vacancies (to be added to the reemployment effort) that combines state of the art technology with a revival of the mutual support of Job Clubs;
- Strengthening of the core systems that support both job finding and the administration of the unemployment compensation system;
- Rapid referral to a local Career Center when job prospects in the target career are not plentiful or when prior performance by workers with similar demographic characteristics indicate immediate assistance is likely to be needed;
- Ability to expand the system to cover other individuals -- recent graduates, those with disabilities, welfare to work, etc.

Background

It has long been known that individuals who lose their jobs can easily slip into long-term unemployment if they do not quickly find a new job (usually within 4-6 weeks of losing a job). For older workers, the failure to quickly return to a job may mean a forced retirement long before the productive work years have ended. Despite this knowledge, the unemployment compensation system and the public workforce system have long been only loosely connected to each other. No State unemployment system now requires that its unemployment compensation claimants create a resume or a detailed skill and work history profile at the time of filing their initial claim. Only a couple of states require the creation of a resume within a week to ten days after the initial claim. Most States simply require that the individual register for work with fairly limited information. Only one State provides job openings to claimants when they certify their eligibility to receive their next check.

The basic operations of the unemployment system and of the public workforce system have been underfunded for years. The wrong time for them to break down would be as the nation moves into a recession.

Description

The initiative would have the following elements:

- A requirement that resume creation and the presentation of job openings become a mandatory part of every initial unemployment insurance application and that there be a presentation of job openings to claimants every time they seek another unemployment check.
 - Initially (for the first 6 months of the effort), the requirement may be limited to the 50% of the applicants and claimants who apply online for benefits. The resume building or resume uploading tools exist and can be deployed quickly. There are tools that make it possible to quickly match the resumes to available job openings. There are additional tools that make it possible to quickly code resumes with SOC/O*NET codes that then allow for code to code matching with job openings. The flow of job openings can and should come from the JobCentral/NASWA system which includes jobs from large employers and from the State workforce systems. Various other aspects of this broad agenda will expand the number of jobs in the JobCentral/NASWA collection. The expanded job stream from the real time labor market information system could also be put to use as part of the job match effort.
 - Within 6 months, the requirement should expand to cover the claimants who come to the unemployment system through the phone. Technology exists (developed and refined by the National Federation of the Blind) to allow for the creation of resumes over the phone and for the “reading” of job openings to claimants over the phone. The Federation’s technology has been

specifically targeted for use with the unemployment insurance system and includes both online and over the phone tools that link to a single database. Their tools are designed to be linked to the JobCentral job flows and to facilitate registration in the State Job Banks. The time lag in full implementation is necessary to allow for the installation of phone-based systems in the States and their integration with the State UI infrastructure.

- The Rapid Reemployment approach works at two levels – it provides hope and it demands discipline. The hope is provided because it breaks the psychology that because “I have lost my job, there must be no jobs.” It also provides hope by jump starting the process of job finding that many laid off workers have to face with little experience. The discipline comes from the new seriousness with which the traditional “work test” (are you able, available and looking for work) is being pursued. The fact that “jobs” are provided quicker than checks in this new UI system is a major break with the past. The Rapid Reemployment system, once fully integrated in a State’s UI structure, can take this shift one step further by specifically inquiring about follow-up efforts on the job leads that have been provided in the prior sessions (that follow-up structure has been built into the system crafted by the National Federation of the Blind).
- There are several new tools that can aid the job matching process (and the training matching process) to make it more effective. The State of Minnesota has installed a new system that can match a resume directly to a job database. The technology can pull skills from the resume and skill requirements from the jobs and match them. More interestingly, the technology looks at the career path that others seeking this type of job have followed and the career path evidenced by the individual’s resume. That information is combined with the skill matching to produce the final ranking of jobs presented to the candidate. The ranking score is in effect the estimate of the likelihood that the particular job could be the next job of the person’s resume. A research group in Indiana has taken the transferrable skills analysis to a new level. Their tool, Transferrable Occupation Relationship Quotient (TORQ), produces a ranking of target occupations based not only on the skills but on the growth patterns of the potential target jobs. The integration of real time demand data into the matching equation can quickly help laid off workers find the hot job areas and to determine their likelihood of qualifying for the jobs. For those that do not fully qualify, the tools can facilitate their search for job training.
- The resume could also be sent directly to the appropriate local One Stop Career Center to allow the laid off worker to connect quickly with these public workforce system services. This will be particularly important for those laid off workers who are in occupations where there are few current vacancies and retraining for a new occupation is critical (and better started early in the unemployment spell).
- Modernization of the system for funding State UI operations and increasing the base funding by \$440 million per year. This additional administrative funding would also cover a portion of the cost of running the rapid reemployment system (e.g. interfaces between the UI system and the Rapid Reemployment system, additional phone lines and telecom charges to handle the increased number of minutes that some claimants will be keep on the phone either building resumes or listening to job opening information.
- A vacancy outreach Job Club initiative to be managed by the Employment Service that will add 1.8 million visible vacancies to the system each year from small and medium sized businesses.
- An increase to the base funding for the employment service to handle the increased demands placed on it for assistance as part of the rapid reemployment system.
- Create variations in the core system to serve other populations (welfare to work, prison to work, disability to work) and for incorporation into the career management account.

Costs

The **UI Administrative Funding Reform** will cost an estimated \$450 million per year and would increase the ability of States to smoothly run the UI system, be more sensitive to changes in workloads, monitor benefit and tax fraud more effectively, and invest in new technologies. The increase is in two parts: the first covers the basic deficiencies in the current funding formula (\$400 million) and the second covers the additional costs incurred by the UI system to run its aspects of the rapid reemployment system (\$50 million). The funding increase as long been recognized as necessary; it is expected that the impact of the fraud reduction may in fact cover the full cost of the increase.

The **Vacancy Outreach Job Club** initiative would cost an estimated \$50 million per year and would be managed by the Employment Service. There would be about \$6 million in added costs during the first year to fund some of the technical infrastructure. This approach revives the old concept of the Job Club (basically a mutual support group of the unemployed) and adds a level of 21st century sophistication. Each “club” would be provided with the technology (contact management system and computer aided telephone interview software) and the tools (computers and digital headsets) to make 45,000 outreach calls per “club” per year. The annual funding will be sufficient to underwrite 270 “clubs” with each “club” generating between 6,500 and 7,000 hidden job market vacancies per year (enough to generate the targeted 1.8 million vacancies).

Each club would have two staff “managers” (Employee Service employees). One manager would be responsible for supervising the outreach efforts. The other would operate as coach for the group working with them on resume writing, interviewing skills and job finding techniques. Each club would consist of 10 individuals and would meet 3 hours per day (half on the phones and half in coaching). Each manager would be responsible for 4 clubs at a time. The membership in the clubs would be rotating with members dropping out as they get a new job and newly unemployed people taking their place. Over, 400,000 unemployed persons will be served by these 21st Century job clubs annually. The expected “vacancy” production from the Club initiative will be 1.8 million per year. Members of the “clubs” would get priority access to the jobs they located; the “excess” vacancies would be fed into the Rapid Reemployment effort and loaded into JobCentral.

The **Employment Service** base funding increase should be in the \$300-350 million per year range (about \$200 million to reverse recent cuts and to restore the purchasing power of the appropriations to 2000 levels and \$100-150 million increase to cover the costs of the more intensive rapid reemployment role the employment service staff will play). The bulk of the funding should be used to provide direct job search assistance to laid off workers. That assistance will be particularly critical during the recession with a large number of workers who are unfamiliar with finding new jobs. It will also allow the Employment Service to play its historic role as the gateway to jobs created by large scale federal public works spending.

The UI **Rapid Reemployment** system itself will cost about \$30 million to fully install and about \$40 million per year to operate. Most of the \$30 million in start up cost is for hardware, software and installation during the first 6-9 months. The operational costs cover software licenses (for the NFB voice and online tools and for the sophisticated resume to job matching tools), a contribution to the CMA foundation, costs of operating the servers and systems that would feed the matching jobs to the claimants and feed resumes to the State job banks and local One Stop Career Center systems, and the help desks and operational supports for the system.

Special purpose adaptations for other populations could be built quickly using the core technologies created for the UI population. The cost of adapting the system to new populations should be relatively minimal (estimated at less than \$1 million per group). The operating costs would vary depending on how large the population to be serves is and what fraction of that population would connect with the system using the phone (rather than online)

Outcomes

Fully implemented, the UI Rapid Reemployment system would be expected to reduce the average time an individual is unemployed by between 1 week and 1.5 weeks. Actual impacts may in fact be greater. At current unemployment benefits rates, that would equate to an annual savings of \$2.85 billion to \$4.3 billion.

The estimate of savings is based on two studies, one focused on the “stick” and the other on the “carrot” aspect of the program. The “stick” study was conducted in Maryland in the 1990s and involved a random assignment experiment on the impact of various “work test” approaches. The UI claimants were required to make different levels of work searches from the minimal (look for two jobs but with no need to report on specifics) to the strictest (look for four jobs and report on all four). Controlling for all other factors, the spell of unemployment was 1.1 weeks shorter for the “strict” method versus the minimal method. The “carrot” study involved an analysis of the impact of job referrals on the duration of UI claimants spell of unemployment. That study was conducted in the late 1990s in Washington and Oregon. The study found a reduction of between 1.1 weeks (Oregon) and 2.1 weeks (Washington) in the spell of unemployment for a claimant who had simply been referred to a job (even though s/he had not gotten that particular job). It seems reasonable to assume that the combination of the carrot and the stick will generate an average reduction of between one and one and a half weeks in the duration of unemployment.

While specific estimates of savings from other adaptations of the rapid reemployment concept would need to await an analysis of the specific effort, it would be safe to assume that the savings far exceed the costs by several times.

Rapid Retraining System

Summary

A rapid retraining initiative to assist laid-off or other workers find the right training to qualify for the jobs being created in the economy today:

- Integrated with the National Learning Exchange to provide a wide range of training opportunities;
- Using the career management account to assist workers in targeting the right career path, understanding the gaps in current skills and developing a plan to close the gaps. Account would have access to information from the real time labor market information system and the latest research on the value of various training programs integrated into the tools.
- Consumer reports that make it simple for users to spot training that works.
- Rapid Retraining Fund administered by the public workforce system.

Background

The economic disruption that is now pulsing through the US economy will shift the occupational and industry mix of the labor force. While millions of laid off workers will be able to find new jobs, on their own or through the assistance of the rapid reemployment initiative, many tens of thousands will require either intensive career counseling or significant retraining or both in order to successfully rejoin the productive labor force. Perhaps millions of retirees will be forced back into the labor market because of losses suffered in their retirement portfolios. Others who had contemplated retirement in a few months or years may be forced to delay that decision. The President's economic stimulus efforts have called for the training of workers to fill Green Jobs, Clean Energy Jobs and Public Infrastructure construction jobs.

The training resources are there, particularly in the public community colleges and in some of the better for-profit education institutions. What is missing is the easy connection between those who need the training and the training itself.

Description

The core of the Rapid Retraining Initiative is the national learning exchange described earlier. The creation of the exchange and the career management accounts will make it very easy to connect the right people with the right training, right away. The other aspects of the initiative can be divided into short, medium and long-term.

Short Term – The basic career management account tools will need to be widely deployed throughout the public workforce development system. At the State level, the career management tools can be built into the job seeker accounts with the State job banks. Many individuals can be introduced to the accounts through the rapid reemployment effort. At the local levels, the same career management tools can be built into the operating systems at the One Stop Career Centers. The learning exchange itself will need to distribute its training search capacity by making various search widgets (easily imbedded search applets) available to any public or private sector job and career related systems that want them.

Access to training will need to be imbedded in the Rapid Reemployment initiative so that workers who are laid off in occupations with weak demand (as determined by real time labor market information system) will be quickly pushed into retraining. Initially, that might be done through an immediate referral to the local One Stop. Eventually, the Rapid Reemployment system will “give” a career management account to every claimant with a requirement that those needing training open their accounts up to the local One Stop career center staff so that they can be assisted with finding the right training and getting the financial support they need. It will also be linked with

“real time” information on the demand for particular types of skills and certifications and on the wage gains that might be expected to be gotten by the investment of time and money in particular training.

Medium Term – As the number of courses available in the learning exchange grows, it will be important to create new ways for the users to find the training. That will include the creation of subsidiary sites to serve various niches – Green Jobs, Defense Jobs, Clean Energy Jobs, Homeland Security Jobs, Health Care Jobs, Bio Tech Jobs, and Public Infrastructure Jobs. It will also include developing tools that focus on the training and re-training needs of the employer. The niche sites will be relatively simple and may require only clear definitions of the occupations and skills involved. This niche site and “targeted landing page” strategy has already been discussed as part of the search engine optimization effort for the National Learning Exchange.

There will need to be a focus on the employer community which funds a large fraction of occupationally related training. This employer focus can be executed by having the public workforce system “sell” the employer version of the CMA to help small and medium sized employers design internal career ladders and then designate the training needed to move up the rungs. They may involve the creation of local training partnerships between groups of businesses and the local community college. Those partnerships may be done as part of a local “sector skills strategy” or other collaborative effort. The ultimate goal of all these efforts is to seamlessly weave training into every aspect of the jobs strategy.

Long Term – In the long term, two efforts will be critical – the linking of demand trends and emerging skill needs to curriculum development efforts of higher education, and the creation “bite size” training where just the right amount of training is available to an individual right away.

The first effort will be the melding of the real time labor market analysis efforts with the on-going curriculum and program development efforts of higher education and particularly community colleges. (We noted in the section on real time LMI that one of the standard reports would focus on supporting the curriculum development and modification efforts at community and other colleges.) As the “labor demand” file becomes denser and more longitudinal, the real time analysis effort will be able to see trends in skill demands and spot emerging skills and occupations. That flow of information will have both a national and local component. At the national level, a clearer understanding of the full complement of skills that the market is demanding for each occupation will emerge. As that information is fed back into educational institutions, it will allow basic curricula and programs to be updated to reflect market demands. At the local level, the demand analysis will not only shape the content of the curriculum but also the shape and size of programs offered. The demand analysis will be able to spot persistent labor shortages and be able to signal those needs to the colleges. The demand analysis will also be able to highlight the high demand but low visibility occupations that will emerge as the economy restructures. The Green Jobs and Clean Energy efforts are likely to produce demand for occupational skills in unexpected place (e.g., power system control room operators skilled in balancing loads from thousands of micro-producers rather than just a few mega power plants). The Rapid Retraining initiative will need to be focused on bringing the spotlight onto those places and feeding the information to individuals, counselors and program developers who can take action on this new intelligence.

The second effort will be the acceleration of trends toward competency based training and just in time training. These two trends push for training that is more “bite sized” and available both 24/7 and asynchronously. Online, computer-based and distance learning will become more dominant in the workforce training arena precisely because of the need for speed and the need to accommodate schedules and life styles. This bite sized training is also less expensive and more likely to be “consumed” by individuals and small businesses. Much of the infrastructure to support the rapid increase in this type of training is in place. Community colleges are teaching as many as 30% of their students online in some systems. These colleges have also begun to master the techniques of creating not only high quality online content but also of managing a student body that enters courses at any time and engages in interaction with instructors, fellow students and mentors in an asynchronous way. The Advanced Distributed Learning (ADL) initiative funded by the Departments of Defense and Labor in the late 1990s has produced much of the technical infrastructure needed to have various instructional programs work with each other and for the managing the building of new courses from discrete learning objects. As noted earlier, the Learning Exchange intends to incorporate the full courses and the learning objects from the ADL effort into the searchable database. The “validation” component of the career management account will allow the individual to produce evidence of the courses and learning objects s/he has taken in a way that employers can verify.

Lead Agency

Because of the tie into the unemployment insurance and One Stop career center systems, the logical lead agency would be Labor.

Costs

The key components and related costs of the rapid retraining effort have already been described in other sections. The National Learning Exchange and the Career Management Account are critical. There are two remaining elements that need to be priced: the “trriage” tool that would use real time LMI to direct laid off workers and others into retraining programs when their prior occupations are in low demand, and a targeted retraining fund.

Triage Tool -- The triage tool is an algorithm that will estimate the likelihood that an individual will be reemployed in his/her same occupation, a different but related occupation or will need substantial retraining in order to maintain the same standard of living. By breaking the stream of unemployed workers (or others) into two reemployment piles and one pile that will need retraining that task to be handled by the staff at the One Stop centers will be simplified. For the first 3-5 weeks after unemployment, the two reemployment groups will be handled on a self-service basis by the CMA and the rapid reemployment system. The retraining group would be automatically referred to the One Stop center so that a quick training plan can be put into place. (The CMA can be programmed to assign the individual who is referred to do some “homework” so that first meeting with the One Stop counselor can be more than a get to know you session.) Getting the laid off worker into retraining immediately will mean that s/he will have a chance to complete most or all of the retraining before unemployment benefits are exhausted. Those in the reemployment groups who have not found jobs after the first 3-5 weeks can be brought into the One Stop center for assistance.

It is useful to note that the two reemployment groups will be exposed to training opportunities through the CMA and will be encouraged to use their active job seeking phase as a time to also plan out their long-term career plan using the tools and information available in the CMA.

The triage algorithm will cost an estimated \$750,000 to build, test and install into the rapid reemployment system.

Matching Grants to State Training Funds. While the Administration has already increased funding for federal financial aid as part of the Recovery Act and has proposed further increases as part of the FY 2010 budget, there may need to be additional resources targeted to the short term skills training of worker in transition or of incumbent workers. It would make sense to put these new resources out to the States in the form matching grants to encourage State level training funds. Several States have funds that are financed by general revenues, SUTA surcharges or interest on UI Trust Funds:

Massachusetts	Workforce Training Fund	SUTA Surcharge
Indiana	Skill Enhancement Fund	SUTA Surcharge
Michigan	No Worker Left Behind	General Revenue
Texas	Skills Development Fund	General Revenue
Wyoming	Workforce Development Training Fund	General Revenue and Interest on UI Trust Funds

Providing a federal match to those funds, up to a certain cap based on the State’s civilian labor force, would encourage more States to make the investments and greatly expand targeted skills training efforts with a minimum of federal administrative costs. Overall costs for this training incentive fund would be \$2 billion per year.

Outcomes

The expected long-term outcomes from this rapid reemployment effort and the introduction of millions of individuals to the Learning Exchange and the Career Management Accounts are:

- Individuals will consume more training and consume more of the right training because it will be easier to find training and it will be directly related to identified career goals.
- Government education dollars (and private dollars) will be better invested because users will have better information on which to base their decisions.
- Training costs will drop as individuals and firms are able to shop for the most appropriate training.
- Training costs and time to complete training will drop as employers and individuals accept competency-based training and as the training itself becomes increasingly just in time and bite size.
- Small employers will be encouraged to offer employee training as costs drop and the need for release time goes down.
- Education and training providers will become more responsive to the demands of the labor market as they see the demand trends reflected in the activity on the Learning Exchange and as market demand analysis developed as part of a real time LMI effort.
- The economy itself maintains a competitive edge because workers and employers can respond almost instantly to emerging skills requirements.

Veteran and Military Spouse Career Scouts

Background

There are two additional groups where the government has a particular interest in their employment: veterans (and members of the National Guard and Reserves) and military spouses. Smoothing the transition from military to civilian life should be a part of the debt we owe the veterans for their service. For those with on-going attachments to the military (Guard and Reserves), solid civilian employment is often a prerequisite to service. With increased and longer activation of Guard and Reserve units during the current conflicts, employment issues have become more central. (Even with the statutory guarantee of reemployment, many Guard and Reserve members will seek different jobs either because the company that owes them the job is no longer in business or because their own personal development during service has lead them to seek a more challenging job.)

The systems in place to handle veteran to civilian transition tend to be sporadic and often require the veteran and spouse to become their own service coordinator. The problem is particularly severe for younger veterans who have persistently higher unemployment rates experienced by young (20-24 year old) veterans when compared to their non-veteran peers and veterans in general. The reason for the problem becomes evident when you look at how services are provided in the current transition system.

- *TAP is a one-time event.* Up to six months prior to separation, active duty service members participate in formal TAP (Transition Assistance Program) sessions managed jointly by the Departments of Labor (DOL), Defense (DoD) and VA. While this pre-separation lead time is used well by some soon-to-be veterans, for others (53% according to a January 2007 DOL study) exit from the military comes without a civilian job offer or definitive plans to pursue a college education. At the point of actual service exit, no one is actively reaching out to the veteran.
- *While veterans are mobile, services aren't.* Most exiting service members do not remain near their last duty station. Rather, they scatter to every corner of the country, some to the home town where they lived before entering service and some to new communities.
- *Current system is passive.* Back "home", it is the newly minted veteran who has the responsibility to reach out for services to VA or to the Labor programs administered by the states. The first Labor contact may be an application for unemployment benefits where the veteran simply joins the line with the laid off textile

worker or the downsized middle manager to qualify for a weekly check. There is no systematic program that provides veterans with counseling on the effective use of their GI Bill education benefits in terms of selecting a course of study or an appropriate college.

- *No follow up – problem signs missed.* Once veterans are separated there is no further contact from DoD. Unless a veteran registers at a One-Stop center there is no on-going contact from Labor. This self-service transition period is also a critical one on the mental health front where warning signs of PTSD and other mental health issues go unrecognized and an unsettled transition adds to a potentially volatile mix.
- *Time gaps.* The next government initiated contact will not come for a few months after separation from active duty when VA mails information about its programs and benefits to the new veteran. If the veteran has already moved again during this interim period he/she may not receive VA's letter.

In active duty military, there is a saying that “you recruit the soldier but you retain the family.” For families, retention often revolves around the services that are made available to the spouse. Was there assistance in finding a job as part of the spouses transfer to a new base? Was there assistance in connecting up with social and community services? Was there assistance to allow the spouse to continue to pursue an education that may have been started near one military base only to be interrupted by a transfer to a new base.

There have been significant efforts by the Department of Defense to provide increased support to the spouses in part from the recognition that while you may recruit the soldier you must retain the family. With the cost of training a new soldier averaging over \$47,000 (Army Training and Doctrine Command) and significantly more for specialized occupations and officers, retention efforts directed at spouses would seem to have a large return on investment. With the departure of America's Job Bank and the discontinuation of military spouse pilot programs, the Labor Department no longer provides any targeted support for the military spouses. The Defense Department is still deeply concerned but they are not in the jobs and careers business.

Defense as created an extensive website (www.milspouse.org) which is designed to provide information to families and to support their movement around the country. However, these services tend to be passive (the family must seek them out) unless the family assistance program at the particular base is pro-active.

Creating a Active System of Career and Service Scouts

It is easy to see the cracks that some veterans and families fall through during times of transition. The cracks need to be filled with a combination of continuity, technology, outreach and a human touch. Three Departments are currently involved in the transition of recently separated veterans – Labor, Veterans Affairs and Defense. Defense is solely responsible for family assistance for active duty personnel; however, Labor generates a large amount of the information on jobs, careers and some local services that families would need. A coordinated effort is a must with all three agencies playing their appropriate role. The approach for the veteran cannot and should not be “one size fits all.” While the package of services has tiers, veterans would not be expected to follow a straight line progression.

- *Special versions of the National Labor Exchange and Career Management Accounts for Veterans and Military Families.* These specialized job and talent banks would tap into the power and the reach of the JobCentral NLX but the “talent pool” would be limited to just veterans or military families. The job seeker accounts in these sites would be specially designed versions of the Career Management Account turned to the issues that either the veteran or family member will face. These will include tools to assist the veteran to create a solid civilian resume and to qualify for college credit based on his/her military experience and training, and include a number of self-initiated career exploration tools to guide the veteran's choices and related courses of study at college. The “service locator” will have a special search built to allow the transition military family (or veteran) to find a variety of services through a single search.
- *Career and Service Scouts.* Each veteran will be assigned a career scout within 90 days of his/her exit from service. Each family will be assigned a career and service scout 90 days prior to a planned base transfer or overseas deployment. The scouts will be trained career and service specialists who will operate virtually – over the phone or web. The “scouts” will stay with the veterans through their entire transition, guiding the veterans -- teaching them to use the electronic tools, helping them find a suitable career path, linking them

with government and community services, linking them to professionally trained and certified career and education counselors and marketing them to prospective employers. The scout would link the veteran with service structure in his/her community including the Labor Department funded Career Centers and veteran employment programs, VA funded medical, educational and vocational rehabilitation services, and State funded veterans services. For the families, the “scouts” will work with the spouses to ensure a smooth transition to the new base or to handle special issues that arise during a deployment. Like the veteran focused-scouts, they will help introduce the families to the tools in the electronic site and stay with the family until all transition issues are resolved.

- *Employer Outreach.* Behind the scenes, there will be a systematic outreach to national employer associations and their member companies to create an express path for the transitioning veteran to be considered for a career starting job. The outreach effort will also focus on the companies in the areas surrounding military bases to improve the number of vacancies that can be shown to military spouses.
- *Social Services Outreach.* Using the information gathered through the National Services Locator, there will also be a systematic outreach to social service providers in all metro areas in the country with 100,000 or more people during the first year of the effort and to all communities with 20,000 or more in full implementation. All communities with military bases will be covered in the first year. Through this effort, a network of providers will be established who can provide hometown services to veterans and military families providing a bridge to complement and supplement VA and DoD provided services. This systematic outreach will help to catalog the State veterans programs, those supported by local government and the multitude of efforts by non-profit organizations designed specifically to assist veterans and military families. The effort will focus on creating express referral paths that can be used by the veterans/families in a self-service mode or by the career and service scouts.
- *Career Counselors.* Veterans who wish to immediately pursue employment but are uncertain what career field they want to pursue will be assigned to a career counselor. For those veterans who receive both career assessments and career counseling, as with their career scout, the same counselor will remain with the veterans while providing appropriate services. Veterans who intend to pursue their education using the MGIB and the new Chapter 33 post 9-11 benefits and are uncertain about their course of study or the appropriate college will be provided specialized college counseling services.

Because many elements of this proposed initiative already exist, it will be possible to stand up the initial phase of this transition initiative within 90 days of the go ahead. The program can be ramped up within a year to cover all recently separated veterans and Guard and Reserve units returning from OIF/OEF deployments as well as cover all military bases in the territorial US.

Lead Agencies –

The efforts need to be led by the VA and DoD in a cooperative venture since much of the outreach and a number of services will overlap for veterans and military families. Program coordinators covering bases for family services can also interface with the transition services units at the same bases to handle separating service members. Labor will be indirectly involved through its electronic tools (NLX, Service Locator) and its local services (One Stop Career Centers and Veterans Employment and Training Service).

Cost

At full implementation, the initiative would be expected to serve 250,000 veterans per year. About half of the number will be transitioning out of the active duty military (125,000 would be a reasonable estimate of this cohort based on the DOL study). The other 125,000 would be Guard and Reserve members returning from OIF/OEF deployments.

At full implementation, the annual cost would be just over \$250 per veteran served or \$63.5 million for the 250,000 veterans. There would be about \$1,250,000 in start up costs. Those costs would likely be fully offset by a reduction in unemployment benefits (reimbursed to the various States by Defense through the UCX program). A reduction in one week of unemployment benefits on average would cover the full cost.

The career/transition scouts for military families would be approximately \$175 per spouse served. If 250,000 spouses used the service during the year, the cost would be about \$44 million.

The expected outcomes are:

- Reduction in the unemployment rate for recently separated veterans, particularly those who are 20-24 years old.
- Better utilization of GI Bill benefit (currently less than 70% of the veterans use their full benefits)
- Quicker and better connections to VA and DOL services with many fewer veterans falling through the cracks and/or drawing UCX. (Moving veterans out of UCX and into jobs faster or avoiding UCX altogether would result in significant savings to DoD which funds the cost of UCX completely. A reduction of 15-18% in UCX payments would fully fund the program's \$63.5 million cost.)
- Easier connections between employers and veterans
- Better utilization of community-based social and human services
- Better retention of service members because family needs are better served. An increase of re-enlistments among the families served of 5% (1,250 additional re-enlistments) would save more the program costs in training costs alone.

Capacity Building Efforts

Capacity Building for the LMI and One Stop Career Center Operations

Much of the burden of creating specialized local products from the new streams of information created by this transformational system will fall of the State level Labor Market Information operations. Much of the burden for implementing these new approaches will fall on the local One Stop Career Center system that will not only have to learn to use the new tools but will also become much more tightly integrated with the unemployment insurance system and with the local training system (particularly the community colleges). All of this will require increasing the capacity of the system. Specifically, the State LMI shops will need staff that is specifically dedicated to providing the local analysis of the real time data streams and providing assistance in the use of the Career Management Account. There will also need to be training of the One Stop Career Center staff on the use of the new information and the new tools as well as on how to operate in a more integrated and transformed system.

The estimated cost of this capacity building will be an average of \$275,000 per State per year for the LMI operation and assistance with training One Stop centers in the use of the new tools and information products.

Capacity Building for Community Colleges and Other Higher Education Institutions

Community colleges are known for their ability to respond to the local market and to maintain contact with the local employer community. However, that ability is not uniform across the country. Also, none of the community colleges and other higher education institutions knows how to use the new real time LMI tools and only a few States have robust longitudinal data programs.

The above described new content and tools will also challenge the traditional approaches to academic and career counseling, post graduation placement, curriculum development and employer outreach.

There needs to be twin efforts. The first will deal with the information systems (longitudinal data, real time LMI, Learning Exchange) which will impact data collection, marketing, curriculum development, etc. We would propose that there be a person funded in the State department of education whose task it would be to train all higher education institutions in the State on the tools and to coordinate their participation in the Learning Exchange. We would estimate that this position would cost about \$125,000 per year (including salary, fringes, equipment and travel).

The second effort will be focused on the student services operations of the colleges (academic and career counseling, job placement). We would propose that there be another full-time person at each State whose job it would be to train college staff on the use of the career management account and on the other tools. We would estimate that this position would cost about \$125,000 per year (including salary, fringes, equipment and travel). In addition, we believe that grants of \$150,000 each should be offered to two organizations NACE (National Association of Colleges and Employers) and College Central who provide the software to manage a large number of college career centers across the country. The grants would be integrate the career management account into their systems.

Overall the capacity building effort for the college would cost \$13,550,000 in the first year and \$13,250,000 thereafter.

Cost and Savings Summary

Enhancements and New Efforts Only

Core Elements	Year One	Year Two	Year Three	On-going
National Labor Exchange	\$ -	\$ -	\$ -	\$ -
National Learning Exchange	\$ 3,500,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000
National Social and Community Service Locator				
Development	\$ 2,550,000			
Operations	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
National Career Information Network				
Development	\$ 900,000			
Operations	\$ 1,275,000	\$ 1,275,000	\$ 1,275,000	\$ 1,275,000
Real Time LMI	\$ -	\$ -	\$ -	\$ -
Database	\$ 6,390,000	\$ 2,690,000	\$ 2,690,000	\$ 2,690,000
Research Environment	\$ 4,265,000	\$ 4,140,000	\$ 4,140,000	\$ 4,140,000
Standard Reports	\$ 1,700,000	\$ 500,000	\$ 500,000	\$ 500,000
Longitudinal LMI				
Expand RDCs	\$ 4,000,000	\$ 2,000,000	\$ 1,000,000	\$ 500,000
Report Development	\$ 3,000,000			
Report Production	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Career Management Accounts	\$ 6,500,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000
Development	\$ 11,250,000			
Operations	\$ 3,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000
Rapid Reemployment				
State Operational Costs	\$ 66,091,000	\$ 48,534,750	\$ 48,534,750	\$ 48,534,750
National Operational Costs	\$ 53,106,000	\$ 39,856,000	\$ 39,856,000	\$ 39,856,000
Rapid Retraining				
Triage Algorithm	\$ 750,000			
Training Incentive Fund	\$1,000,000,000	\$2,000,000,000	\$2,000,000,000	\$2,000,000,000
Military Family and Veteran Elements				
Military Family	\$ 44,000,000	\$ 44,000,000	\$ 44,000,000	\$ 44,000,000
Recently Separated Veteran	\$ 63,500,000	\$ 63,500,000	\$ 63,500,000	\$ 63,500,000
LMI and One Stop Capacity Building	\$ 14,575,000	\$ 14,575,000	\$ 14,575,000	\$ 14,575,000
College Capacity Building	\$ 13,550,000	\$ 13,250,000	\$ 13,250,000	\$ 13,250,000
Total Core Element Costs	\$1,305,902,000	\$2,250,320,750	\$2,249,320,750	\$2,248,820,750
Estimated Savings				
UI Payments State System	\$3,000,000,000	\$6,000,000,000	\$6,000,000,000	\$6,000,000,000
UI Payments UCX (DoD)	\$ 35,000,000	\$ 70,000,000	\$ 70,000,000	\$ 70,000,000
Savings from additional retention (DoD)	\$ 23,500,000	\$ 58,750,000	\$ 58,750,000	\$ 58,750,000
Student Loan Defaults	\$ 937,500,000	\$1,875,000,000	\$1,875,000,000	\$1,875,000,000

Return on Investment Ratio ___ to 1

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C. Summary and Conclusion

Widespread broadband access opens up significant possibilities on a number of fronts. This paper has attempted to look at those possibilities in the broad area of workforce development.

There would need to be investments by various federal departments to make these possibilities a reality. In general, the added cost would be about \$2.25 billion per year (with \$2 billion of that amount going directly into worker retraining efforts). However, we have estimated that nearly \$9 billion in savings could be generated by the efforts.

These investments would generate a US economy that is more dynamic and more likely to have the skilled workers it needs to respond to global economic challenges. The investments will create a nation of career entrepreneurs who are introduced to the necessary tools when they touch a workforce/education related program but will be given a tool kit that can be used for a lifetime.

These efforts represent a permanent way to shift the US labor market so that more Americans can find opportunities and prepare for the future. They ultimately rest on technologies and assistance that enable the average person to seize new opportunities and to benefit from changes in our economy. They promote and use the public workforce system as vehicle to ensure that Main Street benefits from the recovery and the fairness and equity in the US labor markets becomes more of a reality.