

# Frontline Decision Support System for One-Stop Career Centers in Georgia

August 2002



The Frontline Decision Support System (FDSS) is a set of administrative tools designed to provide customers and staff of One-Stop Career Centers with customized information about employment prospects and the effectiveness of services. The purpose of FDSS is to better inform customers' job search efforts and to improve the effectiveness of employment services in promoting the speedy return to work. FDSS is a joint effort of the Employment and Training Administration of the U.S. Department of Labor, the Georgia Department of Labor, and the W.E. Upjohn Institute for Employment Research. The Upjohn Institute, with financial support from the U.S. Department of Labor, designed and developed the system, and the Georgia Department of Labor integrated FDSS into their workforce system. The Georgia DOL is currently testing the system at two pilot sites, and they expect to implement the system statewide by the end of the year.

## Background

FDSS was created to enhance the operation and effectiveness of One-Stop Career Centers. The Workforce Investment Act (WIA) emphasizes the integration and coordination of employment services. Central to the WIA is a network of One-Stop Career Centers, where all providers of relevant mediated employment services are assembled in one location. This arrangement is expected to streamline the delivery of employment-related

programs and to meet the needs of job seekers and employers more effectively than under a more decentralized system.

Successful implementation of the one-stop system requires new management tools and techniques to help staff meet the challenges presented by the one-stop environment. One major challenge of the WIA is the large volume of customers using the system. The increased numbers come about because of the broader access to services within the One-Stop Career Center and because of the reduced emphasis on program eligibility as a condition of participation in the workforce investment system. However, resources for comprehensive assessment and counseling are typically limited, and front-line staff have few tools to assist them in their daily decision making. Yet, One-Stop Career Center staff are required to perform a wide range of functions. These tasks include eligibility determination, outreach, intake and orientation, initial assessment, job search and placement assistance, provision of information relating to labor market conditions, program performance, and supportive and follow-up services. FDSS provides tools to help with these decisions.

## Goals of FDSS

The Frontline Decision Support System (FDSS) is a set of tools that uses existing administrative data to help staff and customers make

better decisions about job prospects and about appropriate services that meet their needs in finding employment. FDSS offers a systematic framework for staff to quickly assess the needs of customers, to target services that meet customers' needs, and to deliver services in an effective and efficient manner. It also aides customers in becoming better informed about job options, in quickly and systematically accessing labor market information and services, and in finding better job matches more quickly. FDSS is not a new, standalone operating system for One-Stop Career Centers. Rather, it is a set of tools that can be integrated into any computer-based system that has access to administrative data.

## FDSS Tools

FDSS is comprised of two complementary modules that generate recommendations to help staff and customers make informed decisions regarding job prospects and service referrals. The tools within these modules are based upon the recent experience of participants of employment programs in Georgia and includes labor market information, historical service data, and current customer characteristics.

### *Systematic Job Search*

**Module:** This module includes a set of tools that provides customers and staff with customized information about several aspects of the job search

process for the purpose of assisting them in conducting a more systematic search. This module includes three basic components.

1) The reemployment probability component is designed particularly for displaced workers, but is applicable to customers with other needs as well. It provides an estimate of the likelihood that a customer can find a job in the industry in which they were previously employed. 2) The earnings algorithm estimates a range of expected earnings for each job seeker, including those who have not been previously employed. Both components provide job seekers with a realistic assessment of their job prospects and in turn provides them with customized information that can help them conduct a more informed job search. Job seekers can also use these tools to explore what would happen to their reemployment and earnings prospects if they obtained additional education, were willing to work in another area or were available to work different shifts, among other possibilities.

3) The related-occupations algorithm offers individuals, who in their job search have exhausted the likely job prospects within their prior occupation, with a list of other occupations that are closely related to their previous one. By using this tool, job seekers can systematically search through job listings, starting with the jobs for which they are most familiar and qualified. They can also target their job search by using the information generated from the first two components.

The three components are derived from the experience of job seekers with observed characteristics similar to the person who is currently being served. This is accomplished by using administrative data that records the characteristics and outcomes of people who have recently participated

in the various employment programs offered by the One-Stop Career Centers. These tools are based on statistical relationships between various labor market outcomes, such as a person's employment and wages, their personal characteristics, past work history, and local labor market conditions.

#### ***Service Referral Module:***

The service referral module provides information about the likely effectiveness of various employment service activities in getting customers into jobs. It identifies the activities that most often lead to successful employment for clients. The tool provides a customized list of services, ranked from most effective to least effective. The list is customized to reflect the effectiveness of services for past participants with characteristics similar to the customer who is currently being serviced by staff. The list also includes the number and percentage of past participants who have received the various services. The ranking serves as a guide to staff in referring customers to services.

#### **Statistical Tools**

The FDSS tools are based on statistical relationships between a customer's employment outcomes and his or her personal characteristics and other factors that may affect his or her outcomes. The statistical relationships weight the contribution of each of the various factors to these outcomes. Since these relationships are estimated from the experience of people who have recently participated in programs offered by a One-Stop Career Centers, the contributions of the various factors capture their experience in finding employment. For example, a person's educational attainment and past employment history are shown to positively affect the likelihood of being reemployed. For each factor, a specific contribution is estimated. By

applying these weights to the characteristics of customers currently entering a One-Stop Career Center, one can predict the likelihood of that person finding employment, based upon the experience of those past participants with characteristics similar to the person currently being served. In that way, the statistical model customizes the information regarding job prospects (and wages and the effectiveness of services) for each customer entering a One-Stop Career Center.

#### **Operation of the Frontline Decision Support System**

FDSS is designed to be integrated into the existing operating system of a One-Stop Career Center. The Georgia DOL incorporated FDSS into their operating system, which they refer to as the Georgia Workforce System, by developing a set of screens that generate and display the information produced by the various tools. Front-line staff at the One-Stop Career Centers access the FDSS screens by clicking on a tab on the opening page of the system. Information about the customer that already resides in the Georgia Workforce System is automatically fed into the appropriate fields on the screen. Staff can enter missing data and then go through the various components of FDSS with the customer. It is also anticipated that many of the tools can be used in a self-service mode. The screens are displayed at the end of this document.

#### **Data Requirements**

Data required to construct the FDSS tools and to operate the system are obtained from administrative records. These records are already collected by existing employment programs, by One-Stop Career Centers, by the Unemployment Insurance system, and by the Labor

Market Information agency. Data include employment and earnings history, customer characteristics, program participation in employment services, local unemployment rates, occupation and industry employment growth projections, and related occupations (from O\*Net).

In order to estimate the statistical relationships, which form the basis of several of the tools, it is necessary to have access to at least two years of historical data in order that a sufficient number of observations are available to estimate models for different types of workers in different regions of the state, and for those who have participated in the wide variety of programs offered. In order to operate the system, the most current information about the customer and about labor market conditions must be available on the operating system, although some missing

information can be entered into the system at the time of the transaction with the customer.

### **Implementing FDSS**

The W.E. Upjohn Institute, partnered with the Georgia Department of Labor and the U.S. Department of Labor to design, develop, and implement the Frontline Decision Support System for the state of Georgia. This effort involved receiving the appropriate data from the state, constructing longitudinal records so that an historical time line of employment history, program participation and subsequent employment outcomes are available for each participant, and estimating the statistical relationships. Once the tools were estimated, staff from the Georgia Department of Labor programmed the algorithms into the Georgia Workforce System.

For another state to implement FDSS, the state would need to estimate the statistical relationships using their own data. Since the prototype effort has already established the framework and procedures for preparing the data and estimating the statistical relationships, developing FDSS for another state and integrating it into its system would require substantially less expense than required for the prototype.

The Upjohn Institute is uniquely qualified to design, test, and help implement FDSS. In addition to conducting employment-related research, the Institute, as the administrative arm of the local Workforce Development Board, administers all state and federal employment programs for its part of Michigan.

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### **Contacts**

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# Screens from the Frontline Decision Support System integrated into the Georgia Workforce System



Frontline Decision Support System | GWFS | GDOL - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address <http://wwwtest.private.gdol/cgi-bin/cicscgid>

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## FRONTLINE DECISION SUPPORT SYSTEM

### Customer Background Information

Monday May 13, 2002 at 16:10:13 ET.  
[Reemployment and Earning Estimates](#) | [Related Occupations](#) | [Service Referral](#) | [Training Statistics](#)

SSN:

Name - CHRIS TUCKER

<b>Current Age:</b>	17	<b>Resides in:</b>	BACON
<b>Gender/Race:</b>	Black	<b>Claimant:</b>	No
<b>Hispanic Origin:</b>	No	<b>Last Chk:</b>	
<b>Veteran Status:</b>	Yes	<b>Wks paid:</b>	
<b>Recently Separated:</b>	No	<b>BYE:</b>	
<b>Disability:</b>	No	<b>POTENTIAL Dislocated Worker:</b>	No
<b>Citizenship:</b>	Yes	<b>TANF:</b>	No
<b>Economically disadvantaged:</b>	No	<b>Employment Status:</b>	Unemployed
<b>Disability:</b>	Yes - Substantial	<b>Currently in school:</b>	No
<b>Exhausted previous UI claim:</b>	No	<b>Prior Industry:</b>	RETAIL TRADE

Internet zone

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Expanded previous or claim: NO Prior industry: RETAIL TRADE

County of Employment: Barrow

Education Level: 13 Years School Completed (No Post-Secondary Certificate)

High School Graduate: Yes Prior Occupation: Office and administrative support

GED: No Months Experience in Prior Occupation: 50

Driver's license: Yes Prior Hourly Wage Rate: 16 66

Available for all shifts: No Minimum Salary: 200 00 per Week

Wage Information:

Qtr	Year	Wages
4	2001	\$ 00
3	2001	\$ 00
2	2001	\$ 1789 76
1	2001	\$ 00

Recalculate values Reset original values

**Reemployment Probability and Estimated Earnings**

Customer Background Information | Related Occupations | Service Referral | Training Statistics

Internet zone

Frontline Decision Support System | GWFS | GDOL - Microsoft Internet Explorer

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Recalculate values Reset original values

**Reemployment Probability and Estimated Earnings**

Customer Background Information | Related Occupations | Service Referral | Training Statistics

SSN: 111111111 Name: CHRIS TUCKER

Probability of Return to Work in Your Prior Industry  
The chance of returning to the RETAIL TRADE industry in BARROW county is 40%.

Expected Job Growth in Prior Occupation  
Over the next 5 years, employment in the Executive Secretaries and Administrative Assistants occupation is expected to grow by + 2.90% per year in BARROW county.

Likely Reemployment Earnings:  
Individuals with a similar background had the following estimated reemployment earnings:

- 25% had earnings less than \$7.08 per hour
- 50% had earnings less than \$9.18 per hour
- 75% had earnings less than \$11.44 per hour

Minimum Salary desired \$6.66 per hour

**Related Occupations**

Customer Background Information | Reemployment Probability and Estimated Earnings | Service Referral | Training Statistics

Internet zone

## Related Occupations

[Customer Background Information](#) | [Reemployment Probability and Estimated Earnings](#) | [Service Referral](#) | [Training Statistics](#)

The following occupations are related to **Executive Secretaries and Administrative Assistants** . For each related occupation listed, approximate starting hourly wage and the average annual job growth rate in the **North Georgia** Workforce Area are given.

SSN: 11111111 Name: CHRIS TUCKER

Related Occupations	Approximate Starting Hourly Wage	Average Annual Job Growth Rate	O*NET Code
Management Analysts	WAGE N/A	+ 2.19%	13-1111.00
Library Technicians	WAGE N/A	+ 3.69%	25-4031.00
Procurement Clerks	WAGE N/A	- 1.01%	43-3061.00
License Clerks	\$8.54	+ 4.07%	43-4031.00
Production, Planning, and Expediting Clerks	\$11.27	+ 1.19%	43-5061.00

## Service Referral

[Customer Background Information](#) | [Reemployment Probability and Estimated Earnings](#) | [Related Occupations](#) | [Training Statistics](#)

The following is a list of services ranked in order of effectiveness for recent clients in the **North Georgia** region with characteristics similar to those in the Customer Background Information screen.

SSN: 11111111 Name: CHRIS TUCKER

Service	Number of Clients Using Service	Percentage of Clients Using Service	Percentage of Service Users Steadily Working	Relative Effectiveness Index
Testing	50	0.5	68.0	1.20

## Service Referral

[Customer Background Information](#) | [Reemployment Probability and Estimated Earnings](#) | [Related Occupations](#) | [Training Statistics](#)

The following is a list of services ranked in order of effectiveness for recent clients in the **North Georgia** region with characteristics similar to those in the Customer Background Information screen.

SSN: 11111111 Name: CHRIS TUCKER

Service	Number of Clients Using Service	Percentage of Clients Using Service	Percentage of Service Users Steadily Working	Relative Effectiveness Index
Testing	50	0.5	68.0	1.20
Job Search Assistance	1092	10.2	59.2	1.04
Resume Preparation	89	0.8	58.4	1.03
Specific LMI	3400	31.8	57.0	1.01
Order Search	4707	44.0	56.1	0.99
Job Referrals	7573	70.8	56.4	0.99
Call-In	723	6.8	55.9	0.99
Job Search Planning	733	6.9	53.5	0.94
Job Development	224	2.1	52.2	0.92
Bonding Assistance	10	0.1	50.0	0.88
Expanded Workshop	10	0.1	50.0	0.88
Referred to Support Services	81	0.8	49.4	0.87
Counseling	87	0.8	40.2	0.71
Workshops	68	0.6	39.7	0.70
Referred to Training	18	0.2	38.9	0.69
Service Needs Evaluation	136	1.3	27.9	0.49
Customer Service Plan	122	1.1	27.0	0.48
Service Coordination	5	0.0	20.0	0.35

Expanded Workshop	10	0.1	50.0	0.88
Referred to Support Services	81	0.8	49.4	0.87
Counseling	87	0.8	40.2	0.71
Workshops	68	0.6	39.7	0.70
Referred to Training	18	0.2	38.9	0.69
Service Needs Evaluation	136	1.3	27.9	0.49
Customer Service Plan	122	1.1	27.0	0.48
Service Coordination	5	0.0	20.0	0.35
Job Finding Club	1	0.0	0.0	0.00

## Training Statistics

[Customer Background Information](#) | [Reemployment Probability and Estimated Earnings](#) | [Related Occupations](#) | [Service Referral](#)

The following is information about the recent use of the four general types of adult training by clients in the **North Georgia** region with characteristics similar to those in the Customer Background Information screen.

SSN: 111111111 Name: CHRIS TUCKER

Training Type	Number of Clients Using Service	Percentage of Clients Using Service	Percentage of Service Users Steadily Working	Relative Effectiveness Index
On-the-Job Training	35	3.6	28.6	1.33
Adult Ed, Basic Skills, Liter	81	8.3	27.2	1.27
Comprehensive Assessment	540	55.2	21.5	1.00
Occupational Skills Training	358	36.6	19.8	0.92

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Centers in Georgia**



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Document prepared by Randall Eberts and Christopher O'Leary  
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