Unleashing the Power: Improving Indiana’s Labor Market Intelligence

Presentation Prepared by IDWD and Revised by IBRC 2007
Overview

I. Open Systems

II. Current State of Affairs: Results of LMI Needs Assessment

III. Implementing LMI Recommendations: Timeline

IV. Intelligence Integration – Phase I

V. Intelligence Integration – Phase II

VI. Customizing Intelligence for Users

VII. Benefits of Intelligence Integration

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Open Systems Theory

Environment

Inputs
• Information
• Human Talent
• Technology
• Tools

Transformations
• Data Analysis
• Techniques
• Data validation

Outputs
• Reliable and Valid Intelligence
• New Products/Services
• Novel Ideas

Feedback from Intelligence Users

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The Current Data Environment

- **Information for Indiana** – an initiative started as a result of study commissioned by Central Indiana Corporate Partnership to study Indiana’s current data environment

- Partnership of the Governor’s Office, Indiana University’s Indiana Business Research Center, the IUPUI Center for Urban Policy and partnerships with other universities and IGIC.
Significant Findings

1. Policy makers feel that they cannot get the data in a usable form for their purposes.
2. Many rely on special studies prepared by universities or private consultants.
3. Many types of data are difficult to obtain.
4. Timely objective interpretation is not available for many types of data.
5. Objective-based analyses are not available for many public policy issues.

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Recommendations

1. Establish a State Data Initiative – now called *Information for Indiana*
2. Increase awareness of and access to existing data
3. Improve usability of existing data
4. Develop new data to answer the needs of policy makers

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IDWD Response to Recommendations 2 & 3

The IBRC conducted an LMI Needs Assessment to determine current level of awareness, access and usability of existing data.

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LMI Needs Assessment: Methodology

- Assessment of “best practices” used in other states to provide LMI.
- Focus groups (N=4)
- Online survey (N=300)
- Follow-up feedback sessions with LMI users (N=26) to solicit input on study findings and recommendations
Respondents by Work Role

- Employer: 36%
- Workforce services provider: 15%
- Local Economic Developer: 16%
- Government or NFP: 8%
- Education: 6%
- Researcher/data analyst: 13%
- Other: 6%

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Recommended Actions:

1. Provide wage, occupational, and skills trend and time series data
2. Customize data by regions
3. Ability to drill down to county/township/establishment levels
4. Implement GIS mapping of labor market information
5. Update job vacancy survey data
6. Package career guides for community colleges and schools
7. Training on how to access and utilize data and reports
8. Assist with small business development
9. Update/revamp INEWS

IDWD and IBRC 2007
<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Resource Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create user friendly website over haul INBWS</td>
<td>6 mths</td>
<td>Tue 10/1/05</td>
<td>Wed 1/1/06</td>
<td>IBRC - Web/Tech Support</td>
</tr>
<tr>
<td>2</td>
<td>Develop occupational projections</td>
<td>3 mths</td>
<td>Tue 10/1/05</td>
<td>Mon 12/5/06</td>
<td>R &amp; A</td>
</tr>
<tr>
<td>10</td>
<td>Implement GIS</td>
<td>6 mths</td>
<td>Tue 10/1/05</td>
<td>Mon 3/27/06</td>
<td>IBRC/R &amp; A</td>
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<tr>
<td>11</td>
<td>Partner with education institutions to provide</td>
<td>11 mths</td>
<td>Tue 10/1/05</td>
<td>Mon 5/14/06</td>
<td>IBRC/R &amp; A</td>
</tr>
<tr>
<td></td>
<td>small business development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Collect and analyze WorkKeys data</td>
<td>6 mths</td>
<td>Tue 10/1/05</td>
<td>Mon 3/27/06</td>
<td>BCIR &amp; AMBRC</td>
</tr>
<tr>
<td>5</td>
<td>Package and deliver trends in emerging occupations</td>
<td>2 mths</td>
<td>Tue 11/22/05</td>
<td>Mon 1/16/06</td>
<td>BCIR/A Market Support</td>
</tr>
<tr>
<td></td>
<td>and industries</td>
<td></td>
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<tr>
<td>4</td>
<td>Develop county level estimates</td>
<td>8 mths</td>
<td>Mon 3/23/06</td>
<td>Fri 3/29/06</td>
<td>IBRC/R &amp; A</td>
</tr>
<tr>
<td>15</td>
<td>Develop Skills Project</td>
<td>9 mths</td>
<td>Mon 1/23/06</td>
<td>Fri 3/29/06</td>
<td>R &amp; A/IBRC</td>
</tr>
<tr>
<td>6</td>
<td>Package career guides for community colleges and</td>
<td>3 mths</td>
<td>Mon 3/27/06</td>
<td>Fri 5/16/06</td>
<td>R &amp; ACTE</td>
</tr>
<tr>
<td></td>
<td>schools</td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Promote new LMI website</td>
<td>3 mths</td>
<td>Wed 4/5/06</td>
<td>Tue 5/27/06</td>
<td>Marketing</td>
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<tr>
<td>8</td>
<td>Develop training for new LMI website</td>
<td>1 mth</td>
<td>Wed 4/12/06</td>
<td>Tue 5/8/06</td>
<td>R &amp; A/LLI</td>
</tr>
<tr>
<td>9</td>
<td>Provide training on new website</td>
<td>2 mths</td>
<td>Tue 5/5/06</td>
<td>Mon 7/10/06</td>
<td>LLJ</td>
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<tr>
<td>12</td>
<td>Update job vacancy survey</td>
<td>5 mths</td>
<td>Mon 3/23/06</td>
<td>Fri 3/29/06</td>
<td>IBRC/R &amp; A</td>
</tr>
<tr>
<td>14</td>
<td>Provide career guides to community colleges and</td>
<td>2 mths</td>
<td>Thu 7/18/06</td>
<td>Mon 9/11/06</td>
<td>CTE/Market Support</td>
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<tr>
<td></td>
<td>schools</td>
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</tr>
<tr>
<td>3</td>
<td>Package and deliver skill sets in demand</td>
<td>2 mths</td>
<td>Thu 9/7/06</td>
<td>Wed 11/1/06</td>
<td>BCIR/A Market Support</td>
</tr>
</tbody>
</table>
IDWD Response to Recommendation 4

Embark on an Intelligence Integration initiative to develop new data systems to answer the needs of policy makers and researchers.

IDWD and IBRC 2007
<table>
<thead>
<tr>
<th>Data Component</th>
<th>Report</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI Claims</td>
<td>Employer-Level Wage and Employment</td>
<td>Common identifier for both Wage and QCEW records</td>
</tr>
<tr>
<td>Wage Records (UC-5)</td>
<td>Employee Level Wage Info by</td>
<td>Wage records alone are not useful for economic analysis</td>
</tr>
<tr>
<td>Summary Data (QCEW)</td>
<td>Industry, State and County Codes, Physical Location</td>
<td>Combined with Wage Records, can track hiring and separation patterns across counties and industries.</td>
</tr>
<tr>
<td>New Hire Data (I-9’s)</td>
<td>Start date, address, birthdate, &amp; gender</td>
<td>Analysis of additional demographic information on labor market dynamics</td>
</tr>
</tbody>
</table>
QCEW

New Hire data

UC-5

Claims

Database/Integrate

Track Workers: Start to Finish

Employee Life Cycle
## Complimentary State Administrative Data Sources

### Intelligence Integration Components

**Phase II**

<table>
<thead>
<tr>
<th>Data Component</th>
<th>Report</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce Investment Act Performance Measures</td>
<td>Entered employment, credential attainment, emp retention, earnings</td>
<td>WIA Program Evaluations/allocation of resources to targeted occupations</td>
</tr>
<tr>
<td>CS3 – Job Matching System</td>
<td>Individual Demographics</td>
<td>Job seekers in transition</td>
</tr>
<tr>
<td>Welfare-to-Work (TANF)/Food Stamp E &amp; T</td>
<td>Similar to WIA</td>
<td>Evaluation of “Underemployed” population characteristics and barriers to employment</td>
</tr>
<tr>
<td>Educational and Training Programs</td>
<td>Educational and Skill Attainment</td>
<td>Identification of skill gaps</td>
</tr>
</tbody>
</table>

IDWD and IBRC 2007
Who Benefits?

- Econ Dev, Transportation, and Education Agencies
- State and Local Policy Makers
- Educators, Researchers
- WI Bs
  - IDWD and IBRC 2007
- WorkOne Centers
Integration Plan

- Working partnership with the IBRC and their support from LEI to develop the infrastructure
- Link to current DWD workforce data sets – beginning in November 2006
  1. Define and design the database
  2. Create relational tables
  3. Define SSN & test surrogate as PK in each table
  4. Capture all relevant data from New Hire forms, UI Claims, CS3 and UI Wage Records, as determined by R&A
  5. Allow for integration with records from IDOE and CHE when available, using the inventory prepared by R&A

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Integration Plan

- Using the inventory prepared by R&A, IDOE and CHE, IBRC will structure the database.
- It will consist of multiple tables, each including the specific fields available for each record in each data type.
- It will provide integration functionality through the use of spatial geocoding and primary key relations.
- Result will be "n" (frequency) data sets that provide the demographics of the workforce along with other temporal and geographic facets.
Integration Plan

Design database with real data using working on site in LMI (space, computers, phones already provided)

Geocode data to 90% certainty, using a variety of tools to reach that percentage

Manually verify sample of remaining 10% to determine what other steps will be necessary and what the overall impact is of bad geocoding on overall data utility

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Integration Plan

Match records, determine “fall out” of unmatched records and determine why

Develop strategies for dealing with bad matches

Analyze results of geocoding and matched records

Develop data outputs and work with LMI to verify adequacy and accuracy

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Integration Plan

- Design and program outputs with a client-server infrastructure
- Users will initially be internal with full access to confidential data
- Outputs with no confidentiality restrictions will also be developed
Integration Plan

- The following slides show an output system developed for internal use at the North Carolina LMI.

- Show the possibilities of Indiana’s system, although ours will be more robust and will integrate data from other agencies, beginning with DOE and CHE.
Customizing Intelligence for Users: the North Carolina Model

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Analytical Module

Turnover – provides several analysis options

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Indiana’s Output Capabilities

- Tables
  - Statistical counts/cross tabulations
- Graphical outputs
  - Graphs, charts, diagrams, etc.
- Mapping/GIS
  - Color thematic, dot density, topological
- Printed reports
  - Standard and customized products
- Data-file exports
  - Macrodata files, microdata files

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Benefits of Intelligence Integration

- Accuracy
- Availability
- Flexibility
- User friendly
- Real time
- Customizable

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Bottom Line Results

- Informed decision making
- Sound policy development and planning
- Increased customer satisfaction
- Increased efficiency
- Creation of new ideas, products and services

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Time Frame

- Database is structured – Mar 07
- Integrate – April forward
- Add education records – May 07
- Add corrections records – April 07
- Design internal output
- Design public outputs
- Release throughout 2007 and into 2008

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