Developing the NOW Regional Plan: Understanding Labor Markets 2016 Regional Workforce Development Forum June 1, 2016 Jim Shanahan, Ph.D. Shanahan Resources, Inc.

Objective of WIOA

The act stipulates the following objectives:

- * Increase employment, retention, and earnings of clients
- Increase attainment of recognized credentials
- * Improve quality of workforce
- * Reduce welfare dependency
- * Increase economic self-sufficiently

Information to Support the Regional Planning Process

This research seeks to provide insights and hard data on major challenges and opportunities in the labor market of WIOA NEO:

- Analysis of existing and in-demand jobs within NEO industries that are growing
- * Analysis of skills needed by workers, based on employer demand
- * Analysis of the workforce in the region based on skills, prior work experience and barriers to job entry
- Analysis of NEO postsecondary education capacity to address the skills gap between demand and supply of workers in the region
- Search for in-demand job opportunities for persons currently not participating equally in the job and income recovery

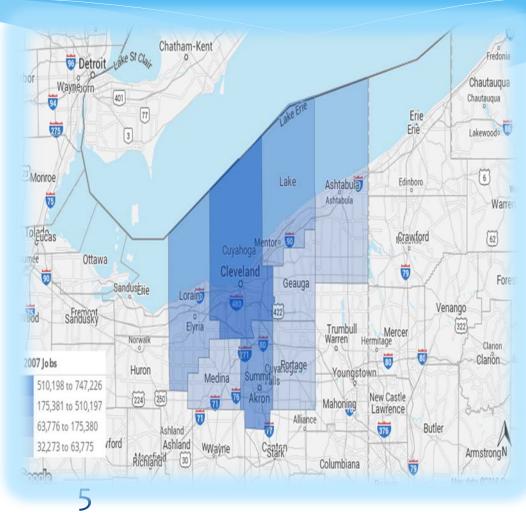
NEO Economic Realities and Labor Market Dynamics

Focus of Investigation:

- * Where are jobs located in the region and commute to work patterns?
- * What is the region's 'skills gap'?
- * What is learned from online job ads about rapidly changing employer demand for skills and jobs?
- * Are there in-demand jobs for the region's workers who have less than a Bachelor's Degree? Do these jobs provide a living wage?
- * To compete for these jobs, what skills will be needed by those not benefitting from the region's job recovery?

NEO Labor Market & Job Access NEO Jobs Concentrated in Cuyahoga and Summit Counties

- There were 1,403,050 jobs provided by industry (including government) in 2007.
- Cuyahoga—53% and Summit with 20%.
- Healthcare (65%) and IT jobs (80%) are the most concentrated in Cuyahoga.
- The region's population is far more decentralized by comparison.



WIOA NEO Region a Web of Inter-related Labor Markets

- NEO workers often live in one county or Workforce Area and work in another.
- * Akron and Cleveland MSA operate somewhat independently as local labor markets: Jobs in demand and pay scales differ.

Total Workers Residing by County and Workplace Destination 2006 to 2010									
cleveland MSA						Akron MSA		Total WIOA	
County of Workplace	Ashtabula	Cuyahoga	Lake	Geauga	Lorain	Medina	Summit	Portage	NEO
County of									
Residence									
Ashtabula	68.7%	6.1%	12.3%	4.9%	0.4%	0.1%	0.8%	0.3%	93.5%
Cuyahoga	0.0%	90.3%	2.3%	0.5%	1.8%	0.9%	2.8%	0.5%	99.2%
Lake	1.2%	32.4%	60.8%	3.1%	0.3%	0.1%	1.2%	0.4%	99.5%
Geauga	_	37.6%	11.1%	44.3%	0.4%	0.3%	3.0%	1.9%	98.6%
Lorain	0.1%	31.5%	0.4%	0.1%	62.3%	1.7%	1.0%	0.1%	97.3%
Medina	0.0%	34.0%	0.4%	0.1%	2.5%	45.9%	12.1%	0.6%	95.6%
Summit	0.1%	14.1%	0.4%	0.3%	0.4%	2.2%	73.3%	4.1%	94.8%
Portage	0.1%	14.7%	0.5%	2.5%	0.1%	0.5%	21.5%	44.0%	84.0%
Total	94 667	60E 024	05 630	20.000	05 517	F2 400	225 004	53.376	1 201 100
Workers	31,557	695,834	95,639	30,906	95,517	52,4 9 6	235,884	53,276	1,291,109

For more information on sampling and estimation methods, confidentiality protection, and sampling and nonsampling errors, see https://www.census.gov/acs/www/Downloads/data_documentation/Accuracy/MultiyearACSAccuracyofData2010.pdf>.

A Case for Regional Cooperation

A regional plan needs to recognize that:

- The majority of jobs are located in the two largest counties, which are in two different workforce or metro areas.
- * The labor market opportunities for workers and employers alike are not aligned with the five local workforce areas.
- * Akron and Cleveland labor markets exhibit different patterns of demand for workers.

"Plan regionally, implement locally"

NEO Job Growth... Sluggish at Best; Inadequate at Worst

- * Total jobs in the economy are still below 2007; recovery much slower than Ohio or nation.
- Expected net gains of total jobs for the NEO economy are only 37,000 jobs by 2021, six years from now. In a region of nearly 1.4 million jobs, that is ane
- NEO may lose population

WIOA NEO Economy: Total Jobs Compared to Ohio and Nation 2015 & 2021

Region	2007 Jobs	2015 Jobs	2007-2015 Change	% Change	2021 Jobs	2015-2021 Change	% Change
WIOA NEO	1,403,050	1,353,196	(49,853)	-3.6%	1,390,138	36,942	2.7%
Ohio	5,306,828	5,257,760	(49,068)	-0.9%	5,485,355	227,595	4.3%
Nation	135,366,499	139,286,250	7 3,919,751	2.9%	148,830,227	9,543,977	6.9%
EMSI Analys	t						

Manufacturing and Government Jobs Hit Hardest

From an industry view:

- Surprising lack of job recovery to 2007 levels is Professional, Scientific and Technical Services; Finance and Insurance and IT
- Bright spots are Healthcare and Management of Companies and Enterprises (corporate functions & Holding companies) and Arts, Entertainment & Recreation.

WIOA NEO: Economic Trends 2007 to 2021 by Industry Group

	NAIC	S	Description	2007 Jobs	2015 Jobs	2007 - 2015 Change	2021 Jobs	2015- 2021 Change
			Health Care and Social Assistance	188,781	215,620	,	247,681 🖡	32,061
1	7	72	Accommodation and Food Services	105,086	115,181	10,095	117,916 🖡	2,735
1	Ę	55	Management of Companies and Enterprises	36,457	43,857	7,400	46,357	2,500
			Arts, Entertainment, and Recreation	19,046	22,086		23,870 🖡	
			Educational Services	28,384	29,280		32,059 🍢	
	E	53	Real Estate and Rental and Leasing	19,604	20,359	756	21,042	683
1		21	Mining, Quarrying, and Oil and Gas Extraction	1,169	1,047	(122)	996	(51)
1			Crop and Animal Production	2,818	2,640	· · ·	2,311 🍢	
			Unclassified Industry	550	325	· · · ·	143 🗖	· · ·
	2		Utilities	4,993	4,354	(639)	4,281 🖡	(73)
1	6	K 1	Other Services (except Public Administration)	41,523	39,308	(2,215)	39,734	426
ľ	5	54	Professional, Scientific, and Technical Services	69,673	67,001	(2,673)	74,118	7,118
į	4	18	Transportation and Warehousing	38,318	34,842	(3,476)	35,152 🍢	309
				22,711	18,597	(4,114)	16,024 🗖	
ľ	4	12	Wholesale Trade	69,962	62,239	(7,723)	61,202 🗖	(1,038)
		00	Administrative and Support and Waste Management and Remediation Services	84,410	76,220	(8,190)	82,511	6,291
1	4	44	Retail Trade	147,345	138,367		139,760 🏼	1,393
		_	Construction	53,203		(8,982)	47,255	
	5	52	Finance and Insurance	63,762		(9,601)	50,906 🗖	(3,255)
	_		Government	183,763	169,473		166,941 🖡	× / /
	3	31	Manufacturing	189,220	164,020		149,021 🖡	(15,000)
ľ				1,370,777	1,323,201	(47,576)	1,359,280	36,079
ĺ	emsi	A	NALYST					

Silver Lining of Job Growth by Occupation

- Job growth occurred in these occupation groups. Note absence of Science and Engineering.
- Only lower skill jobs growing were in Food Preparation and Serving.

From an industry view:

 Most growth was in Healthcare and manufacturing firms producing in niche markets

	WIOA NEO: Occuaptions with 100	0 and More	e Jobs in 20	15	
soc	Description	Employed in Industry Group (2007)	Employed in Industry Group (2015)	Change 2007 to 2015	Median Hourly Earning s
	Managerial				
11-9111	Medical and Health Services Managers	4,032	4,471		\$43.52
11-9033	Education Administrators, Postsecondary Property, Real Estate, and Community	1,137	1,350		\$36.20
11-9141	Association Managers	1,599	1,810	211	\$25.56
11-9151	Social and Community Service Managers	1,070	1,213 🖡	142	\$32.39
11-9051	Food Service Managers	1,927	2,068 •	1 41	\$22.20
	Business and Financial				
13-1161	Market Research Analysts and Marketing	4,497	4,833	336	\$28.84
13-2052	Specialists Personal Financial Advisors	1.762	1,879 -		\$34.06
13-1081	Logisticians	1,702	1,338		\$32.35
	Computer and Mathematics	1,202	1,000	100	\$02.00
15-1121	Computer Systems Analysts	6,706	7,423 🗖	718	\$36.63
15-1132	Software Developers, Applications	5,646	6,096 🖡	⁷ 450	\$38.13
15-1199	Computer Occupations, All Other	2,232	2,370 -	138	\$38.63
	Community and Social Service				
21-1015	Rehabilitation Counselors	1,128	1,440 🗖		\$19.22
21-1022	Healthcare Social Workers	1,707	1,924		\$25.64
21-1021	Child, Family, and School Social Workers	3,053	3,262	209	\$22.16
21-1023	Mental Health and Substance Abuse Social Workers	1,300	1,470	169	\$18.21
21-1093	Social and Human Service Assistants	1,930	2,081 🖡	151	\$14.25
21-1014	Mental Health Counselors	923	1,026 🖡	104	\$20.94
	Education, Training, and Library				
25-3021	Self-Enrichment Education Teachers	1,521	1,668 🗖	⁻ 147	\$20.07
	Healthcare Practitioners and				
20,1000	Technical	5 507	C 205	670	¢46.77
29-1069	Physicians and Surgeons, All Other Licensed Practical and Licensed Vocational	5,527	6,205	•	\$46.77
29-2061	Nurses	8,978	9,617	638	\$20.75
29-2071	Medical Records and Health Information	2,501	2,743	- 242	\$17.67
	Technicians		,		
29-2034	Radiologic Technologists	2,275	2,507 F 1.575 F		\$25.96
29-1171 29-2055	Nurse Practitioners Surgical Technologists	1,350 919	1,575		\$44.22 \$20.96
29-2052	Pharmacy Technicians	3,382	3,526 -		\$13.77
29-2012	Medical and Clinical Laboratory	1.522	1.659	136	\$20.37
	Technicians	,	,		
29-1123	Physical Therapists	1,718	1,852		\$40.46
29-1126	Respiratory Therapists	1,511	1,638		\$26.56
29-2021	Dental Hygienists Health Technologists and Technicians, All	1,911	2,038	F .	\$31.79
29-2099	Other	1,282	1,405	124	\$20.12
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This Sheds Little Light on Labor Market Activity— Job Churn is Source of Most Hiring

Most hires employers need to make are due to job churn, which occurs as worker change employers. Large numbers of workers are involved—they pursue better jobs & employers re-design & up-skill jobs.

"The vast majority of hiring in the U.S. is driven by the need to replace workers who leave one job for another."

- * Churn is greatest among lower skill jobs (food service is highest) and lowest for advanced, higher skill jobs (Engineers is lowest).
- * To successfully improve their jobs, many workers need to improve skill sets to align with what employers seek from new hires.
- * Some attend postsecondary education to address skills and educational credentials they lack.

¹CareerBuilder and EMSI, The Pulse of U.S. Hiring Activity: Labor Market Churn by Occupation & Metro, http://www.economicmodeling.com/2014/12/02/the-slowdown-in-job-churn-explained-and-visualized/

Matching Jobs in Demand to Workforce Quality

- Lower/ Middle Skills Jobs in Demand: Typically require high school credential and some training or college up to and including an Associate Degree; these jobs are primarily found in Sales; Office/ Administrative Support; Installation, Maintenance and Repair; and Production.
- Middle-to-Higher Skill Jobs In Demand: Typically require a Bachelor's Degree; jobs mostly found in Management; STEM; and Healthcare Professional and Technical occupations. Industries with the most job ads are in Professional Services; Healthcare; Manufacturing; Finance and Insurance; and on a smaller scale IT industries.

Importance of Middle-skill, Entry-level Job Opportunities for Lower Skill Workers

- * Jobs for persons, employed or not, with serious skill deficiencies and other barriers to gainful employment. These are persons yet to benefit from economic job recovery.
- * Jobs for semi-skilled workers but lack the new skills in demand for entry-level jobs.
 - * For Medical Secretaries or Assistants, what paths are accessible in or out of healthcare?
 - Or, Sales Associates working part-time in retail? What career moves exist for them and what skills and education do employers seek?

Middle Skills Jobs are Important to Employers & Job Seekers:

Jobs Typically Not Needing a Bachelor's Degree and Pay Living Wage

- * What are in-demand Jobs in NEO? Where are they located? And who has them?
- * Why do these jobs pay better? Have the skills for these jobs been upgraded?
- * What impact does newly required digital skills have?

Breaking Down Labor Market Supply Who Applies for Jobs?

WHO IS ACTIVELY RESPONDING TO JOB ADS?

- Persons currently working are the largest pool of job applicants (includes under-employed), which results from job churn
- * Unemployed
- Persons pursuing postsecondary education and training credentials
- * Persons entering job market for the first time
- * Workers living in other regions

Not Requiring Bachelor's Degree and Pay Above Average Wages²

Ranked by number of occupations by Families of Occupations, there were:

- Office and Administrative Support (6)
- * Sales (4)
- Installation, Maintenance and Repair (4)
- * Production (3)
- * Business and Finance (2)
- Healthcare—RN & LPN (2)

² Kyle Fee and Lisa Nelson, A Look behind the Numbers, Vol. 7, Issue 1; January 22, 2016, Federal Reserve Bank of Cleveland Top 30 Occupation Posts for Jobs Typically Middle Skill: WIOA NEO 2015

		Job
		Postings
BGTOCC	Occupation	%
29114100	Registered Nurse	11.0%
53303200	Tractor-Trailer Truck Driver	8.2%
41401100	Sales Representative	7.2%
41101100	Retail Store Manager / Supervisor	4.5%
43601400	Office / Administrative Assistant	4.2%
43303100	Bookkeeper / Accounting Clerk	3.0%
11202200	Business Development / Sales Manager	2.3%
49907191	Maintenance Technician	2.3%
29206100	Licensed Practical / Vocational Nurse	1.8%
15115100	Computer Support Specialist	1.8%
13107192	Human Resources / Labor Relations Specialist	1.6%
15114100	Database Administrator	1.5%
49302300	Automotive Service Technician / Mechanic	1.4%
15114200	Network / Systems Administrator	1.4%
13201194	Account Manager / Representative	1.3%
43414100	Personal Banker / Banking Sales Staff	1.2%
43601300	Medical Secretary	1.2%
13107191	Recruiter	1.1%
43414100	Intensive / Critical Care Nurse	1.1%
43601300	Laboratory Technician	1.0%
13107191	Insurance Sales Agent	1.0%
29114103	Office Manager	0.9%
29201200	Loan Officer	0.9%
41302100	Quality Inspector / Technician	0.9%
43101191	General Manager	0.9%
13207200	Repair / Service Technician	0.9%
51906100	Clinical Case Manager	0.9%
11102192	Maintenance / Service Supervisor	0.8%
49909900	Restaurant / Food Service Manager	0.8%
Total Posts	: 80,693	67.1%

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Top 30 Occupations Listing Advanced or Occupation-Specific Digital Skills

- Many are Healthcare Professional/ Technical; IT; Engineering; Office and Administrative Support; and Management.
- Two-thirds (20) also appear as Middle skill opportunities.
- Up-skilling these jobs appears to play a role in why these jobs pay better without requiring a Bachelor's Degree.
- Many of the others on listed typically require a Bachelor's Degree.

Top 30 Occupations Listing Digital Skills in Ads during 2015

встосс	Occupation	Job
BUIUCC	Occupation	Postings
29114100	Registered Nurse	8,877
15113100	Software Developer / Engineer	6,032
41401100	Sales Representative	5,817
43405100	Customer Service Representative	4,466
41101100	Retail Store Manager / Supervisor	3,664
43601400	Office / Administrative Assistant	3,378
43303100	Bookkeeper / Accounting Clerk	2,403
29117100	Nurse Practitioner	2,161
15112100	Systems Analyst	1,864
13201193	Accountant	1,846
11202200	Business Development / Sales Manager	1,830
13111100	Business / Management Analyst	1,634
29206100	Licensed Practical / Vocational Nurse	1,444
15115100	Computer Support Specialist	1,443
31909200	Medical Assistant	1,396
13107192	Human Resources / Labor Relations Specialist	1,324
15119902	Network Engineer / Architect	1,282
15119909	Project Manager	1,265
15114100	Database Administrator	1,245
17214100	Mechanical Engineer	1,138
15114200	Network / Systems Administrator	1,134
13201194	Account Manager / Representative	1,070
15119995	IT Project Manager	1,041
13205100	Financial Analyst	1,037
15113300	Computer Systems Engineer / Architect	1,019
43405103	Registrar / Patient Service Representative	977
11911191	Nursing Manager / Supervisor	971
43414100	Personal Banker / Banking Sales Staff	952
43601300	Medical Secretary	944
15113492	Web Developer	934
Source: Lab	or Insight Jobs (Burning Glass Technologies)	

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Goal of Economic Inclusion Moving Lower Skill Workers into Gainful Employment

Barriers that individual job seekers face in accessing training or gainful employment:

- * Limited evidence of an ability to perform or sustain employment.
- * Employers exclude job seekers for reasons other than an ability to perform the job (i.e. non-economic reasons).
- Local labor market failures that limit choices of employers and job seekers, most of whom are not employed or even in the labor force.

Reflect Gender and Race Differences? Is Pending Retiring of Workforce an Issue?

Demographics of Employed Workers African Americans are employed most often in lower skilled occupations. Few in STEM and Management. They are Underrepresented in:

- * Construction (1 in 20)
- Manufacturing (1 in 11)
- * Wholesale Trade (1 in 14)
- Efforts to improve the inclusion of African Americans will need to address skills, education and other barriers.
- Male workers are 90% to 100% of workers in 162 occupations to the exclusion of women.
- Efforts to include women in Management and STEM careers can improve the overall effectiveness of the region's workforce.

Occupations Concentration or Absence of African American Workers

soc	Description	Black or African American
	Healthcare Support Services	
31-1011	Home Health Aides	43%
31-1013	Psychiatric Aides	35%
31-1014	Nursing Assistants	39%
31-1015	Orderlies	38%
	Protection Services	
33-9031	Gaming Surveillance Officers and Gaming Investigators	40%
33-9032	Security Guards	31%
33-9093	Transportation Security Screeners	38%
35-2019	Cooks, All Other	31%
	Personal Care and Service	
39-6011	Baggage Porters and Bellhops	43%
39-6012	Concierges	36%
39-9021	Personal Care Aides	33%
	Office and Administrative Support	
43-3041	Gaming Cage Workers	32%
43-5053	Postal Service Mail Sorters, Processors, and	32%
43-3033	Processing Machine Operators	52%
	Production	
51-6011	Laundry and Dry-Cleaning Workers	31%
51-6021	Pressers, Textile, Garment, and Related	34%
51-0021	Materials	54 /0
	Transportation and Materials Moving	
53-3011	Ambulance Drivers and Attendants, Except	34%
	Emergency Medical Technicians	
53-3021	Bus Drivers, Transit and Intercity	39%
53-3022	Bus Drivers, School or Special Client	31%
53-4041	Subway and Streetcar Operators	37%
53-6021	Parking Lot Attendants	37%
53-6061	Transportation Attendants, Except Flight Attendants	32%

Two Implications for Workforce Development: Age of Workers

- Aging into retirement (ages 55-64) is only a major issue for Production occupations. The majority of these jobs are impacted.
- * Manufacturers may not need to replace these workers over the next ten years.
- In contrast, IT and Law Enforcement are occupations where workers are reaching their prime working ages (35 to 44).
- Incumbent worker training may be needed by employers.

Occua	Occuaptions with Largest Percentage of Workers 55 to 64					
SOC	Description	Age 55-64 % of Occupation				
	Production					
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	34%				
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	31%				
51-4061	Model Makers, Metal and Plastic	33%				
51-4062	Patternmakers, Metal and Plastic	37%				
51-4111	Tool and Die Makers	34%				
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	32%				
51-4194	Tool Grinders, Filers, and Sharpeners	36%				
51-6052	Tailors, Dressmakers, and Custom Sewers	32%				
51-8011	Nuclear Power Reactor Operators	31%				
51-8012	Power Distributors and Dispatchers	38%				
51-8013	Power Plant Operators	30%				
51-8021	Stationary Engineers and Boiler Operators	31%				
51-8092	Gas Plant Operators	36%				

Growing & Aligning Labor Market Alignment Strategies

When it comes to improving labor market outcomes, the focus on supply is straight forward:

- * Grow the pipeline of workers attracted to the jobs in demand—grow numbers of qualified workers.
- * Improve and broaden workforce skill sets to better to match employers expectations—<u>improve quality</u>
- Improve ways for job seekers and employers to connect in real time around jobs in demand overall labor market failure—<u>improve connections</u>.

Improving Quality of Workforce through Education and Training

Number of Completers of Associate Degrees in IT by Type of Institution, 2010 to 2014									
Institution Type		2014	2013	2012	2011	2010	Total		
For Profit		162 🍢	229 🍢	228 🍢	222 🍢	207	1,048		
Private, Non-profit College		15 🍢	24 🍢	56 🍢	28 🍢	21	144		
Public Community College or Branch Campus		294 🍢	354 🍢	305 🍢	312 🍢	231	1,496		
Total		471	607	589	562	459	2,688		

- This potential pipeline of new (or newly trained) workers is a good indicator of the region's ability to impact the quality (as well as quantity) of IT talent over time.
- Is this rate of increase in the region's potential IT job seekers large enough to impact the skills gap? Probably not.
- Is the number of graduates from the 28 different IT degree concentrations the right mix of skills given the IT skills and jobs most in demand?

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Addressing the Skills Gap: Whose Job is it?

- The State expects that WIOA Regional Plans will stipulate how to:
 - Align Ohio's education and training programs with the needs of business
 - * Guide job seekers and students to careers that are most likely to result in employment that provides a family-sustaining wage
 - * Create industry-led dialogue with local and state workforce partners to identify skill gaps ways to address any shortfalls
- * Two positive outcomes: employers satisfy hiring needs from residents of the region; in turn, more of the region's workforce attain better jobs.

This is everyone's job