New Career Pathways featuring Stacked and Latticed Credentials is published

Advanced Manufacturing Pathway Options

High School → Non-Degree Training with Industry Credential → Associate Degree → Bachelors Degree → Masters Degree

High School Learner

Academic Focus before Graduation

- Vocational Training Pathways
  - Manufacturing Production Process Development
  - Quality Assurance
  - Production
  - Maintenance, Installation, & Repair

High School Equivalency/Adult High School

Soft Skills Needed

- Problem Solving Skills
- Time Management
- Stress Management
- Communication Skills
- Self-Awareness
- Self-Management
- Work Ethics

Continuing Education

Training Leading to an Industry Credential

- MSSC: CPT and CLT
- NCCER
- AWS
- Siemens
- PMMI
- GLA
- OSHA (10/40/Forklift)
- NCCRC
- Welding
- BioWork

Career Options

- Siemens Level I Operator
- Siemens - Other
- Instrumentation Technician
- Control Technician
- Production Supervisor
- Machinists
- Manufacturing Production Technicians
- Equipment Repair
- OSHA Specialist
- Metal Workers
- Welders
- Industrial Mechanics
- Quality Inspector
- Quality Process Analyst

Curriculum

College Options

- Mechatronics (A/B/M)
- Industrial Systems (A/B/M)
- Electrical Power Plant Technology (A/B/M)
- Electrical/Electronic Technology (A/B/M)
- Welding (A)
- Biological Technician (A/B/M)

Career Options

- Machinist
- Industrial Systems Technician
- Electrician/ Electronics Technician
- Electrical/ Electronics Maintenance Specialist
- Technical Service Provider
- Process Improvement Technician
- Engineering Technician
- Industrial and Technology Manager
- Research Technician
- Electro-Mechanical Technician
- Electrical Troubleshooter
- PLC programmer
- Operator - Non-nuclear fueled power facilities
- Welder

A= Associate of Applied Science Degree
B=Bachelor's Degree
M=Master's Degree

Mechatronics Engineering Technology

(A40350)
Associate in Applied Science Degree

Suggested Course Sequence : (Hours per week)

	Title	Class	Lab	Work Exp/ Clinical	Credits
FALL SEMESTER (First Year)					
MEC 130	Mechanisms	2	2	0	3
ISC 112	Industrial Safety	2	0	0	2
CIS 110**	Introduction to Computers	2	2	0	3
DDF 211	Design Process I	1	6	0	4
ENG 111*	Writing and Inquiry	3	0	0	3
MAT 121	Algebra/Trigonometry I	2	2	0	3
		12	12	0	18
SPRING SEMESTER (First Year)					
ELC 131	Circuit Analysis I	3	3	0	4
PHY 131	Physics-Mechanics	3	2	0	4
ELC 117	Motors and Controls	2	6	0	4
DFT 154	Introduction to Solid Modeling	2	3	0	3
MEC 180	Engineering Materials	2	3	0	3
		12	17	0	18
SUMMER SEMESTER (First Year)					
ENG 112*	Writing/Research in the Disc	3	0	0	3
Humanities/Fine Arts Elective 3 0 0 3 (ART 111*, ART 114*, ART 115*, ENG 231*, ENG 232*, HUM 115**, HUM 122**, MUS 110*, MUS 112*, PHI 215*, PHI 240*)		3	0	0	3
		6	0	0	6

FALL SEMESTER (Second Year)

HYD 110	Hydraulics/Pneumatics I	2	3	0	3
ATR 112	Introduction to Automation	2	3	0	3
MEC 161	Manufacturing Processes	3	0	0	3
ELC 213	Introduction to Instrumentation	3	2	0	4
Social/Behavioral Science Elective (ECO 251*, ECO 252*, HIS 111*, HIS 112*, HIS 131*, HIS 132*, POL 120*, PSY 118, PSY 150*, SOC 210*, SOC 213**, SOC 220**)		3	0	0	3
		13	8	0	16

SPRING SEMESTER (Second Year)

MAC 179	CNC Milling: Operator	0	2	0	1
ELN 260	Programmable Logic Controllers	3	3	0	4
MEC 260	Fundamentals of Machines Design	2	3	0	3
ATR 280	Robotic Fundamentals	3	2	0	4
Major Elective					3
		8	10	0	15

MAJOR ELECTIVE LIST: (Select at least 3 hours)

ELC 115	Industrial Wiring	2	6	0	4
ELC 133	Circuit Analysis II	3	3	0	4
ELC 215	Electrical Maintenance	2	3	0	3
ELN 131	Analog Elecronics I	3	3	0	4
ELN 133	Digital Electronics	3	3	0	4
MAT 122	Algebra/Trigonometry II	2	2	0	3
WBL 111	Work-Based Learning I	0	0	10	1
WBL 112	Work-Based Learning I	0	0	20	2
WBL 113	Work-Based Learning I	0	0	30	3
WBL 121	Work-Based Learning II	0	0	10	1
WBL 122	Work-Based Learning II	0	0	20	2

WBL 123	Work-Based Learning II	0	0	30	3
WBL 131	Work-Based Learning III	0	0	10	1

Total Semester Hours required for A.A.S Degree: 73

Triangle Regional
Career Pathways Collaborative

List of Attachments

1. Demand Driven And Data Informed
2. Employer Engagement
3. Collaborative
4. Career Awareness
5. Articulation and Coordination
6. Work-Based Learning
7. Multiple Points of Entry and Exit
8. Evaluation
9. NEG – Sector Partnership IT Career Pathway Implementation Budget

Triangle Regional
Career Pathways Collaborative

ATTACHMENT 1

DEMAND DRIVEN AND DATA INFORMED

List of Attachments:

1. Triangle Regional Career Pathways – Advanced Manufacturing Job Demand and Career Ladder
2. STAR JOBS – North Central – Manufacturing sorted by Star rating
3. Commuting Patterns Within the Region
4. State of the South Report for Warren, Vance, Granville and Franklin Counties
5. Demand Occupation, Employer Agreed upon Pathways at November 17 meeting
6. Industry Snap Shot of Manufacturing in the Kerr-Tar WDB Region
7. NAICS Codes for Positions from NCWorks

Triangle Regional Career Pathways – Advanced Manufacturing

Job Demand and Career Ladder

Job Description	Current Openings (in nine counties, on July 5, 2016)	Median Wage	Education (minimum level of current job openings)	Technologies and Tools Used (top five, found in current openings)	Certifications (top five, found in current openings)
Biological Technicians *Assist biological and medical scientists in laboratories. Set up, operate, and maintain laboratory instruments and equipment, monitor experiments, make observations, and calculate and record results. May analyze organic substances, such as blood, food, and drugs.*	38	$40,040	Associate—12.50% Bachelor—54.17% Not Specified—33.33%	•Microsoft Word •PowerPoint •Protective Clothing •MS Word •Orthotics	• AALAS Technician • Commercial Driver's License (CDL) • Medical Tourism Association
Computer-Controlled Machine Tool Operators, Metal, and Plastic *Operate computer-controlled machines or robots to perform one or more machine functions on metal or plastic work pieces.*	10	$38,690	No minimum—18.18% HS or Equiv—78.79% Associate—3.03%	•Lathes •Calipers •Micrometers •Machining Centers •Templates	• No data available
Industrial Machinery Mechanics *Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.*	7	$45,790	No Minimum-15.63% HS or Equiv-73.44% 1yr Col/tech/voc-3.13% 2yr col/tech/voc-4.69% 3yr col/tech/voc-1.56% Associate-1.56%	•Forklift •Hoist •Eye protection •Calipers •Welders	• Commercial Driver's License (CDL)
Machinists *Set up and operate a variety of machine tools to produce precision parts and instruments. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.*	24	$38,930	No Minimum-13.70% HS or Equiv-75.34% 1yr Col/tech/voc-2.74% Associate-6.85% Bachelor-1.37%	• Lathes • Micrometers • Milling Machines • Calipers • Personal Protective Equipment	• Commercial Driver's License (CDL) • NCCER • NIMS (Machine Maintenance, Service and Repair Level III)

Manufacturing Production Technicians *Set up, test, and adjust manufacturing machinery or equipment, using any combination of electrical, electronic, mechanical, hydraulic, pneumatic, or computer technologies.*	35	$62,170	No Minimum-6.74% HS or Equiv-44.94% Voc Cert-2.25% Associate-7.87% Bachelor-3.37% Not specified-34.83%	• Cell Phone • Personal Protective Equipment • Calipers • Utility knives • Safety glasses	• No data available
Medical Equipment Repairers *Test, adjust, or repair biomedical or electromedical equipment.*	1	$43,460	HS or Equiv—87.50% Associate—12.50%	• Water Treatment Equipment • Dollies • Personal Protective Equipment • Site Management • Multimeter	• CBNT • BMET
Occupational Health and Safety Specialists *Review, evaluate, and analyze work environments and design programs and procedures to control, eliminate, and prevent disease or injury caused by chemical, physical, and biological agents or ergonomic factors. May conduct inspections and enforce adherence to laws and regulations governing the health and safety of individuals. May be employed in the public or private sector. Includes environmental protection officers.*	6	$62,360	HS or Equiv—19.05% Associate—19.05% Bachelor—19.05% Not Specified—42.86%	• Microsoft Access • PowerPoint	• Certified Safety Professional • CPR
Sheet Metal Workers *Fabricate, assemble, install, and repair sheet metal products and equipment, such as ducts, control boxes, drainpipes, and furnace casings. Work may involve any of the following: setting up and operating fabricating machines to cut, bend, and straighten sheet metal; shaping metal over anvils, blocks, or forms using hammer; operating soldering and welding equipment to join sheet metal parts; or inspecting, assembling, and smoothing seams and joints of burred surfaces. Includes sheet metal duct installers who install prefabricated sheet metal ducts used for heating, air conditioning, or other purposes.*	11	$34,410	No minimum—40.91% HS or Equiv—59.09%	• Hard hat • Safety glasses • Personal Protective Equipment • Grills • Shears	• No data available

Telecommunication Equipment Installers and Repairers (Except Line Installers) *Install, set-up, rearrange, or remove switching, distribution, routing, and dialing equipment used in central offices or headends. Service or repair telephone, cable television, Internet, and other communications equipment on customers' property. May install communications equipment or communications wiring in buildings.*	29	$50,780	No minimum—3.57% HS or equiv.—55.95% 2yr col/tech/voc-1.19% Not specified—32.39%	• Cell phone • Site manager • Hammers • Extension ladder • Screwdrivers	• CCNA
Welders, Cutters, Solderers and Brazers *Use hand-welding or flame-cutting equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.*	15	$37,950	No minimum—16.81% HS or Equiv—26.05% 1yr col/tech/voc-0.84% 2yr col/tech/voc-1.68% Voc certificate—0.84% Not specified—53.78%	• Welders • Welding Equip • Jigs • Cutting equip • Torches	• CDL • Certified Welder

Occupation			Employment						Wage (Hourly)	Requirements	
Stars	SOC	Title	2012	2022	Change (10 year)	Annual % Growth	Annual Openings	Job Posting	Annual Median	License	Education
★★★★★	15-1151	Computer User Support Specialists ✚	7,473	9,191	1,718	2.09%	289	View Jobs	$50,626		Some college, no degree
★★★★★	15-1132	Software Developers, Applications ✚	11,470	14,200	2,730	2.16%	420	View Jobs	$91,929		Bachelor's degree
★★★★	49-3023	Automotive Service Technicians and Mechanics ✚	5,210	5,731	521	0.96%	184	View Jobs	$36,643	✔	High school diploma or equivalent
★★★★	47-4021	Elevator Installers and Repairers ✚	180	252	72	3.42%	10	View Jobs	No Data		High school diploma or equivalent
★★★★	19-4091	Environmental Science and Protection Technicians, Including Health ✚	403	512	109	2.42%	27	View Jobs	$38,486	✔	Associate's degree
★★★★	49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers ✚	3,847	4,357	510	1.25%	155	View Jobs	$60,012		High school diploma or equivalent
★★★★	49-9041	Industrial Machinery Mechanics ✚	2,139	2,371	232	1.04%	85	View Jobs	$47,518		High school diploma or equivalent
★★★★	27-1025	Interior Designers ✚	278	332	54	1.79%	12	View Jobs	$45,634		Bachelor's degree
★★★★	49-9071	Maintenance and Repair Workers, General ✚	9,085	10,279	1,194	1.24%	293	View Jobs	$37,954		High school diploma or equivalent
★★★★	49-9062	Medical Equipment Repairers ✚	334	446	112	2.93%	20	View Jobs	$53,017		Associate's degree
★★★★	49-9044	Millwrights ✚	168	229	61	3.15%	9	View Jobs	$43,487		High school diploma or equivalent
★★★★	49-3042	Mobile Heavy Equipment Mechanics, Except Engines ✚	670	802	132	1.81%	32	View Jobs	$40,650		High school diploma or equivalent
★★★★	29-9011	Occupational Health and Safety Specialists ✚	630	703	73	1.10%	24	View Jobs	$61,408		Bachelor's degree
★★★★	47-2211	Sheet Metal Workers ✚	982	1,233	251	2.30%	43	View Jobs	$34,861		High school diploma or equivalent
★★★	19-4021	Biological Technicians ✚	1,015	1,128	113	1.06%	41	View Jobs	$40,528		Bachelor's degree

★★★	19-4031	Chemical Technicians +	971	1,080	109	1.07%	35	View Jobs	$45,814		Associate's degree
★★★	17-3022	Civil Engineering Technicians +	1,621	1,603	-18	-0.11%	34	View Jobs	$48,908		Associate's degree
★★★	49-2011	Computer, Automated Teller, and Office Machine Repairers +	1,564	1,733	169	1.03%	50	View Jobs	$41,310		Some college, no degree
★★★	51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic +	708	831	123	1.61%	32	View Jobs	$32,758		High school diploma or equivalent
★★★	17-3023	Electrical and Electronics Engineering Technicians +	1,085	1,122	37	0.34%	26	View Jobs	$59,312		Associate's degree
★★★	49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment +	546	592	46	0.81%	16	View Jobs	$48,481	✔	Postsecondary non-degree award
★★★	51-2031	Engine and Other Machine Assemblers +	501	539	38	0.73%	12	View Jobs	$37,851		High school diploma or equivalent
★★★	51-1011	First-Line Supervisors of Production and Operating Workers +	4,319	4,155	-164	-0.39%	61	View Jobs	$55,902		Postsecondary non-degree award
★★★	49-9098	Helpers--Installation, Maintenance, and Repair Workers +	1,038	1,310	272	2.35%	58	View Jobs	$23,354		High school diploma or equivalent
★★★	11-3051	Industrial Production Managers +	1,401	1,295	-106	-0.78%	25	View Jobs	$102,346		Bachelor's degree
★★★	51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers +	4,031	4,100	69	0.17%	95	View Jobs	$37,015		High school diploma or equivalent
★★★	51-4041	Machinists +	1,809	1,969	160	0.85%	57	View Jobs	$38,149		High school diploma or equivalent
★★★	49-9043	Maintenance Workers, Machinery +	504	583	79	1.47%	14	View Jobs	$38,357		High school diploma or equivalent
★★★	17-3027	Mechanical Engineering Technicians +	334	371	37	1.06%	11	View Jobs	$50,001		Associate's degree
★★★	51-9122	Painters, Transportation Equipment +	171	190	19	1.06%	5	View Jobs	$40,182		High school diploma or equivalent
★★★	43-5061	Production, Planning, and Expediting Clerks +	1,639	1,697	58	0.35%	47	View Jobs	$39,456		High school diploma or equivalent

★★★	13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products ✚	1,939	2,035	96	0.48%	45	View Jobs	$59,787		High school diploma or equivalent
★★★	49-2098	Security and Fire Alarm Systems Installers ✚	540	587	47	0.84%	16	View Jobs	$38,668	✔	High school diploma or equivalent
★★★	51-2041	Structural Metal Fabricators and Fitters ✚	307	326	19	0.60%	14	View Jobs	$34,427		High school diploma or equivalent
★★★	17-3031	Surveying and Mapping Technicians ✚	652	787	135	1.90%	26	View Jobs	$36,012		High school diploma or equivalent
★★★	51-2092	Team Assemblers ✚	7,652	7,720	68	0.09%	128	View Jobs	$25,072		High school diploma or equivalent
★★★	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers ✚	2,407	2,652	245	0.97%	57	View Jobs	$48,410		Postsecondary non-degree award
★★★	49-9052	Telecommunications Line Installers and Repairers ✚	443	530	87	1.81%	20	View Jobs	$35,023		High school diploma or equivalent
★★★	51-4121	Welders, Cutters, Solderers, and Brazers ✚	1,319	1,462	143	1.03%	46	View Jobs	$35,232		High school diploma or equivalent
★★★	51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders ✚	438	520	82	1.73%	19	View Jobs	$37,264		High school diploma or equivalent
★★	51-3011	Bakers ✚	1,097	1,138	41	0.37%	31	View Jobs	$21,792		Less than high school
★★	51-9011	Chemical Equipment Operators and Tenders ✚	468	416	-52	-1.17%	16	View Jobs	$45,390		High school diploma or equivalent
★★	51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders ✚	418	391	-27	-0.67%	8	View Jobs	$28,813		High school diploma or equivalent
★★	51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders ✚	495	412	-83	-1.82%	8	View Jobs	$37,333		High school diploma or equivalent
★★	51-2022	Electrical and Electronic Equipment Assemblers ✚	2,518	2,462	-56	-0.22%	30	View Jobs	$27,913		High school diploma or equivalent
★★	51-2023	Electromechanical Equipment Assemblers ✚	318	307	-11	-0.35%	4	View Jobs	$36,141		High school diploma or equivalent

★★	51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic ✚	479	404	-75	-1.69%	9	View Jobs	$35,380	High school diploma or equivalent
★★	51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders ✚	598	531	-67	-1.18%	16	View Jobs	$36,917	High school diploma or equivalent
★★	51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders ✚	255	209	-46	-1.97%	6	View Jobs	$52,610	High school diploma or equivalent
★★	51-9198	Helpers--Production Workers ✚	2,744	2,584	-160	-0.60%	47	View Jobs	$22,232	Less than high school
★★	49-9031	Home Appliance Repairers ✚	360	357	-3	-0.08%	11	View Jobs	$40,615	High school diploma or equivalent
★★	17-3026	Industrial Engineering Technicians ✚	520	500	-20	-0.39%	11	View Jobs	$44,699	Associate's degree
★★	53-7063	Machine Feeders and Offbearers ✚	1,190	1,089	-101	-0.88%	24	View Jobs	$24,498	Less than high school
★★	51-9082	Medical Appliance Technicians ✚	123	131	8	0.63%	5	View Jobs	$42,662	High school diploma or equivalent
★★	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders ✚	1,420	1,263	-157	-1.16%	40	View Jobs	$29,412	High school diploma or equivalent
★★	51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic ✚	274	243	-31	-1.19%	5	View Jobs	$38,549	High school diploma or equivalent
★★	49-3053	Outdoor Power Equipment and Other Small Engine Mechanics ✚	287	306	19	0.64%	8	View Jobs	$30,276	High school diploma or equivalent
★★	51-9111	Packaging and Filling Machine Operators and Tenders ✚	2,468	2,230	-238	-1.01%	58	View Jobs	$32,382	High school diploma or equivalent
★★	53-7064	Packers and Packagers, Hand ✚	4,637	4,905	268	0.56%	149	View Jobs	$21,204	Less than high school
★★	51-9151	Photographic Process Workers and Processing Machine Operators ✚	355	360	5	0.14%	10	View Jobs	$25,497	High school diploma or equivalent
★★	51-7041	Sawing Machine Setters, Operators, and Tenders, Wood ✚	239	260	21	0.85%	9	View Jobs	$23,460	High school diploma or equivalent
★★	51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators,	1,987	1,806	-181	-0.95%	69	View Jobs	$60,392	High school

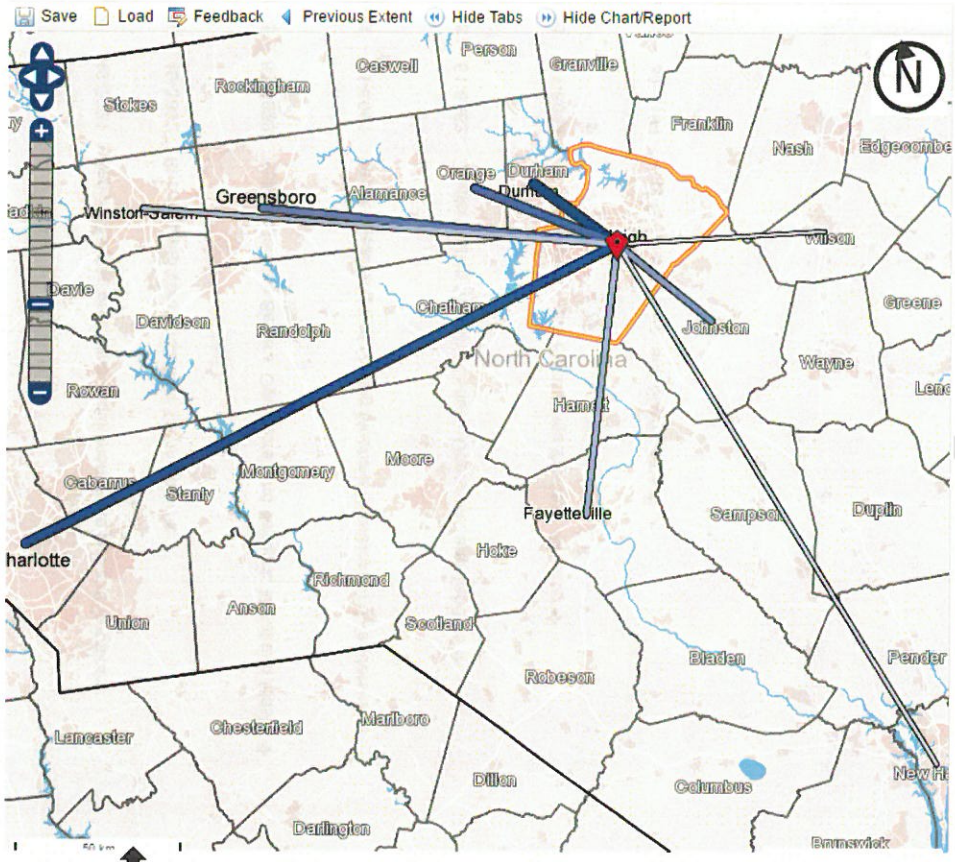
		and Tenders ✚									diploma or equivalent
★★	51-4111	Tool and Die Makers ✚	339	335	-4	-0.12%	2	View Jobs	$35,717		High school diploma or equivalent
★★	43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping ✚	426	467	41	0.92%	13	View Jobs	$29,595	✔	High school diploma or equivalent
★★	51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing ✚	662	710	48	0.70%	9	View Jobs	$23,789		High school diploma or equivalent
★	51-7011	Cabinetmakers and Bench Carpenters ✚	406	360	-46	-1.20%	3	View Jobs	$30,073		High school diploma or equivalent
★	49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers ✚	158	152	-6	-0.39%	2	View Jobs	$34,714		High school diploma or equivalent
★	51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic ✚	1,244	1,143	-101	-0.84%	11	View Jobs	$24,698		High school diploma or equivalent
★	51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic ✚	183	159	-24	-1.40%	4	View Jobs	$32,896		High school diploma or equivalent
★	47-4041	Hazardous Materials Removal Workers ✚	158	146	-12	-0.79%	3	View Jobs	$33,359		High school diploma or equivalent
★	51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic ✚	270	243	-27	-1.05%	5	View Jobs	$22,882		High school diploma or equivalent
★	51-9195	Molders, Shapers, and Casters, Except Metal and Plastic ✚	173	161	-12	-0.72%	6	View Jobs	$33,009		High school diploma or equivalent
★	51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic ✚	528	430	-98	-2.03%	6	View Jobs	$26,481		High school diploma or equivalent
★	51-9123	Painting, Coating, and Decorating Workers ✚	144	126	-18	-1.33%	3	View Jobs	$28,715		Less than high school
★	51-9196	Paper Goods Machine Setters, Operators, and Tenders ✚	374	328	-46	-1.30%	3	View Jobs	$36,668		High school diploma or equivalent
★	51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic ✚	218	187	-31	-1.52%	4	View Jobs	$30,104		High school diploma or equivalent

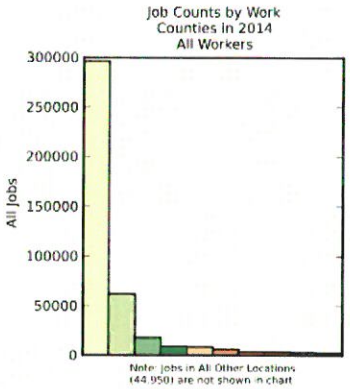
★	51-6031	Sewing Machine Operators ✚	851	585	-266	-3.68%	4	View Jobs	$19,692	Less than high school
★	51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders ✚	255	206	-49	-2.11%	4	View Jobs	$21,793	High school diploma or equivalent
★	51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders ✚	553	446	-107	-2.13%	9	View Jobs	$25,951	High school diploma or equivalent
★	51-6093	Upholsterers ✚	181	166	-15	-0.86%	5	View Jobs	$29,295	High school diploma or equivalent
Not Rated	51-9191	Adhesive Bonding Machine Operators and Tenders ✚	68	64	-4	-0.60%	2	View Jobs	$38,286	High school diploma or equivalent
Not Rated	51-8091	Chemical Plant and System Operators ✚	96	82	-14	-1.56%	4	View Jobs	$53,135	High school diploma or equivalent
Not Rated	51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders ✚	40	37	-3	-0.78%	1	View Jobs	No Data	Less than high school
Not Rated	51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic ✚	76	92	16	1.93%	4	View Jobs	$42,220	High school diploma or equivalent
Not Rated	47-4099	Construction and Related Workers, All Other ✚	631	816	185	2.60%	30	View Jobs	$34,385	High school diploma or equivalent
Not Rated	51-9193	Cooling and Freezing Equipment Operators and Tenders ✚	17	15	-2	-1.24%	0	View Jobs	$26,442	High school diploma or equivalent
Not Rated	51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders ✚	85	76	-9	-1.11%	2	View Jobs	$30,698	High school diploma or equivalent
Not Rated	51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic ✚	90	70	-20	-2.48%	2	View Jobs	$31,498	High school diploma or equivalent
Not Rated	49-2092	Electric Motor, Power Tool, and Related Repairers ✚	100	97	-3	-0.30%	2	View Jobs	$39,423	Postsecondary non-degree award
Not Rated	17-3024	Electro-Mechanical Technicians ✚	44	41	-3	-0.70%	1	View Jobs	No Data	Associate's degree
Not Rated	49-2097	Electronic Home Entertainment Equipment Installers and Repairers ✚	47	46	-1	-0.21%	2	View Jobs	No Data	Postsecondary non-degree award
Not Rated	17-3029	Engineering Technicians, Except Drafters, All Other ✚	141	159	18	1.21%	5	View Jobs	$53,102	Associate's

											degree
Not Rated	17-3025	Environmental Engineering Technicians ✚	77	101	24	2.75%	4	View Jobs	$51,515		Associate's degree
Not Rated	51-9194	Etchers and Engravers ✚	24	22	-2	-0.87%	1	View Jobs	$40,916		High school diploma or equivalent
Not Rated	51-6092	Fabric and Apparel Patternmakers ✚	19	13	-6	-3.72%	0	View Jobs	$26,015		High school diploma or equivalent
Not Rated	51-7021	Furniture Finishers ✚	63	59	-4	-0.65%	1	View Jobs	$28,157		High school diploma or equivalent
Not Rated	51-9022	Grinding and Polishing Workers, Hand ✚	118	113	-5	-0.43%	3	View Jobs	$29,480		Less than high school
Not Rated	51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic ✚	50	49	-1	-0.20%	1	View Jobs	$30,327		High school diploma or equivalent
Not Rated	49-9099	Installation, Maintenance, and Repair Workers, All Other ✚	985	1,067	82	0.80%	24	View Jobs	$42,147	✔	High school diploma or equivalent
Not Rated	51-9071	Jewelers and Precious Stone and Metal Workers ✚	97	78	-19	-2.16%	2	View Jobs	$44,694		High school diploma or equivalent
Not Rated	19-4099	Life, Physical, and Social Science Technicians, All Other ✚	528	609	81	1.44%	29	View Jobs	$37,872		Associate's degree
Not Rated	49-9094	Locksmiths and Safe Repairers ✚	104	111	7	0.65%	5	View Jobs	$35,626	✔	High school diploma or equivalent
Not Rated	53-7199	Material Moving Workers, All Other ✚	89	98	9	0.97%	3	View Jobs	No Data		Less than high school
Not Rated	51-4199	Metal Workers and Plastic Workers, All Other ✚	115	136	21	1.69%	3	View Jobs	$31,778		High school diploma or equivalent
Not Rated	51-4061	Model Makers, Metal and Plastic ✚	69	76	7	0.97%	2	View Jobs	$39,733		High school diploma or equivalent
Not Rated	51-8099	Plant and System Operators, All Other ✚	15	18	3	1.84%	1	View Jobs	$49,656		High school diploma or equivalent
Not Rated	49-9069	Precision Instrument and Equipment Repairers, All Other ✚	82	97	15	1.69%	4	View Jobs	$60,802	✔	High school diploma or equivalent
Not Rated	51-9199	Production Workers, All Other ✚	801	830	29	0.36%	24		$34,599	✔	High school

								View Jobs			diploma or equivalent
Not Rated	49-2021	Radio, Cellular, and Tower Equipment Installers and Repairs ✚	43	50	7	1.52%	2	View Jobs	$39,755		Associate's degree
Not Rated	49-3092	Recreational Vehicle Service Technicians ✚	22	25	3	1.29%	1	View Jobs	No Data		High school diploma or equivalent
Not Rated	51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic ✚	12	10	-2	-1.81%	0	View Jobs	$30,674		High school diploma or equivalent
Not Rated	51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders ✚	53	42	-11	-2.30%	1	View Jobs	$23,750		High school diploma or equivalent
Not Rated	51-6062	Textile Cutting Machine Setters, Operators, and Tenders ✚	108	79	-29	-3.08%	2	View Jobs	$27,631		High school diploma or equivalent
Not Rated	51-6099	Textile, Apparel, and Furnishings Workers, All Other ✚	57	43	-14	-2.78%	0	View Jobs	$18,642		High school diploma or equivalent
Not Rated	51-4194	Tool Grinders, Filers, and Sharpeners ✚	73	68	-5	-0.71%	1	View Jobs	No Data		High school diploma or equivalent

Commuting Patterns for Workers Who Live in the Nine-County TRCPC Region, by County (Top Ten Destinations Listed)





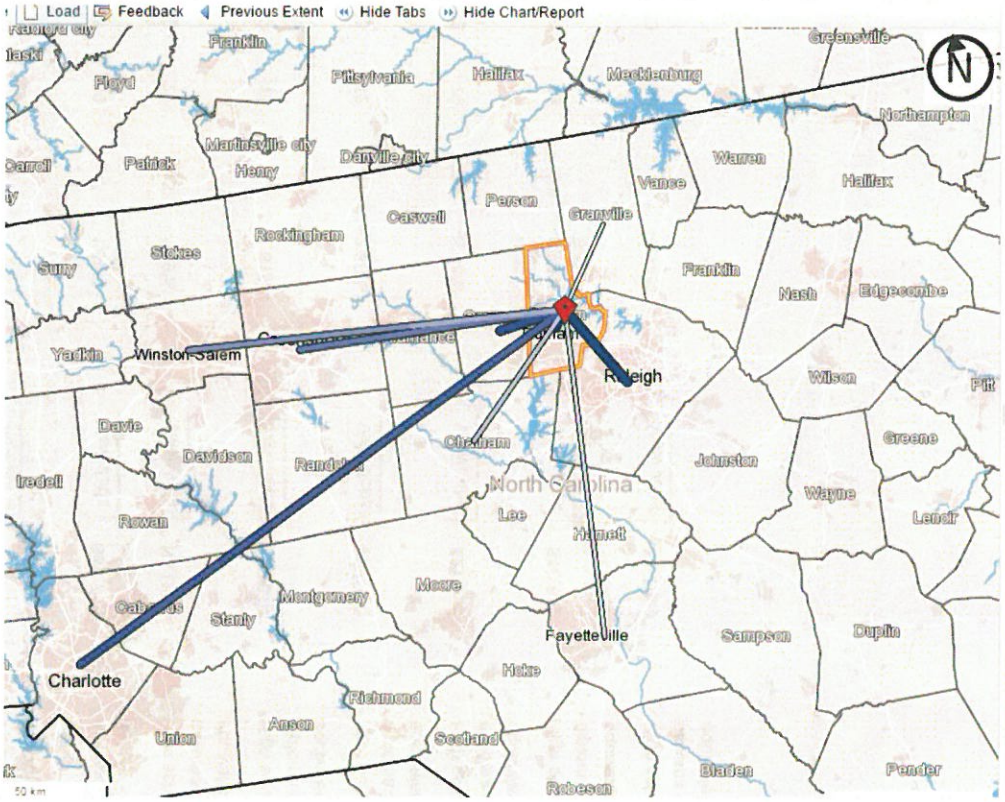
View as Bar Chart

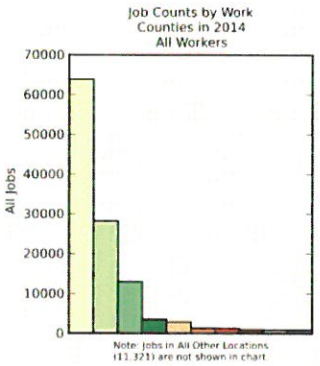
Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	457,576	100.0%
Wake County, NC	296,350	64.8%
Durham County, NC	61,870	13.5%
Mecklenburg County, NC	18,059	3.9%
Orange County, NC	9,215	2.0%
Guilford County, NC	8,501	1.9%
Johnston County, NC	6,217	1.4%
Cumberland County, NC	3,617	0.8%
Forsyth County, NC	3,404	0.7%
New Hanover County, NC	2,864	0.6%
Wilson County, NC	2,529	0.6%
All Other Locations	44,950	9.8%

WAKE

DURHAM





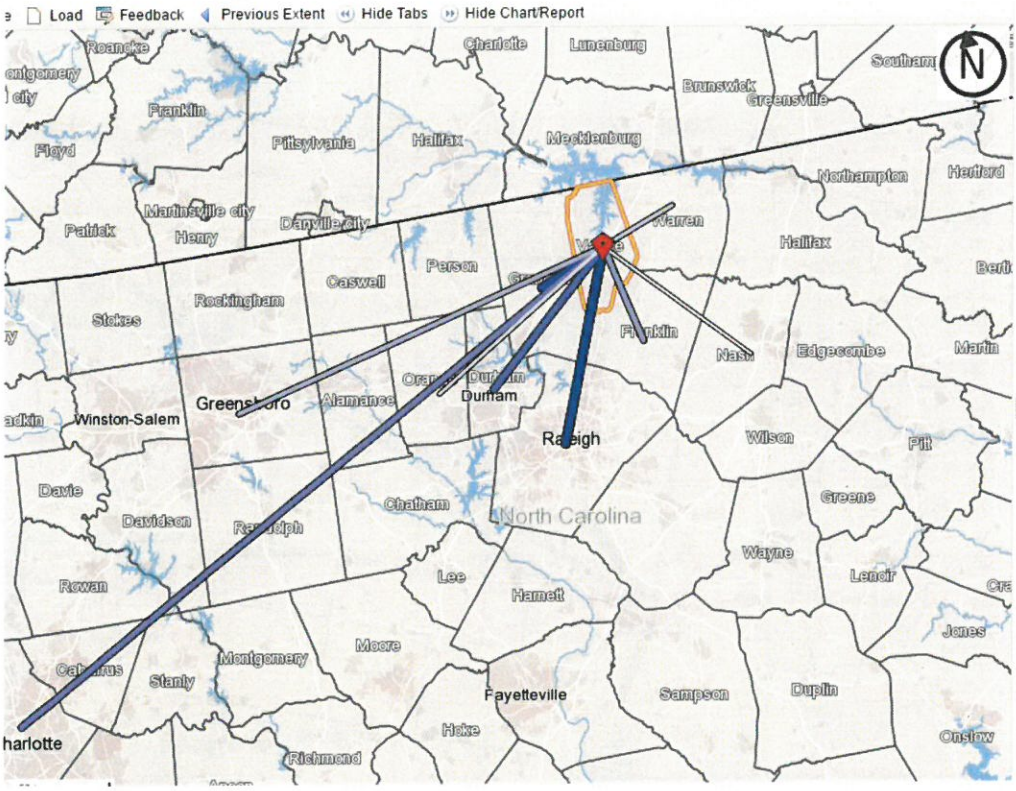
View as Bar Chart

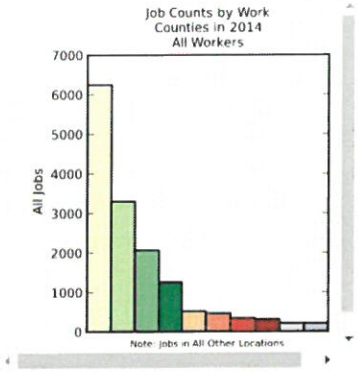
Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	127,784	100.0%
Durham County, NC	63,843	50.0%
Wake County, NC	28,185	22.1%
Orange County, NC	12,977	10.2%
Mecklenburg County, NC	3,488	2.7%
Guilford County, NC	2,847	2.2%
Forsyth County, NC	1,265	1.0%
Alamance County, NC	1,230	1.0%
Chatham County, NC	932	0.7%
Cumberland County, NC	869	0.7%
Granville County, NC	827	0.6%
All Other Locations	11,321	8.9%

Source: http://onthemap.ces.census.gov/ (Report pulled 6/30/2016)

Commuting Patterns for Workers Who Live in the Nine-County TRCPC Region, by County (Top Ten Destinations Listed)





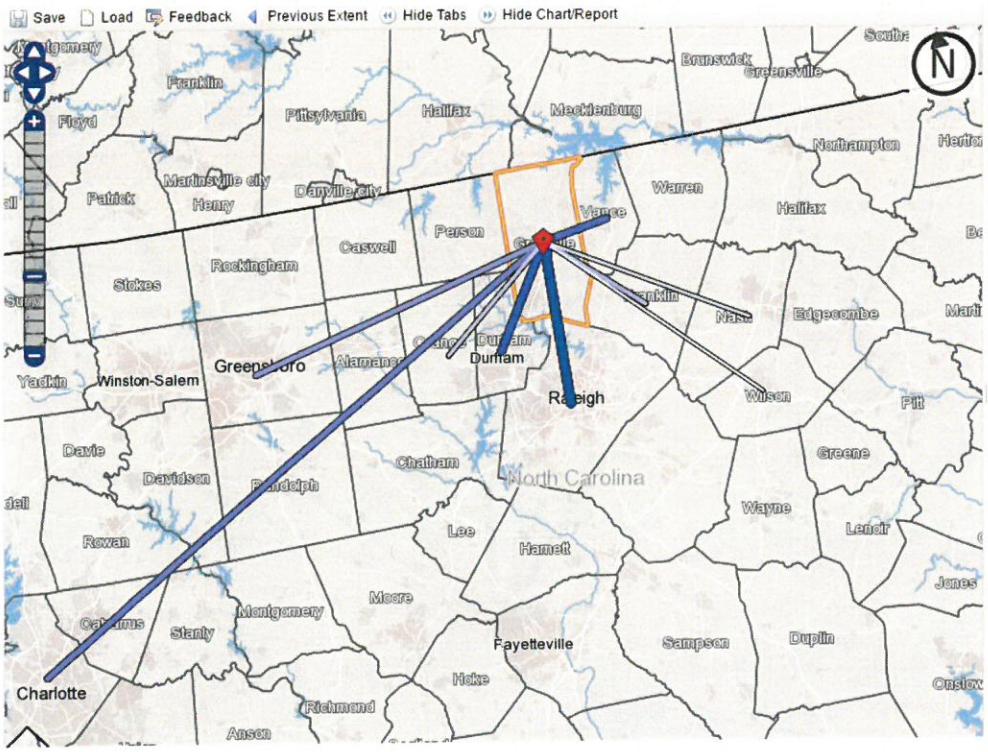
View as Bar Chart

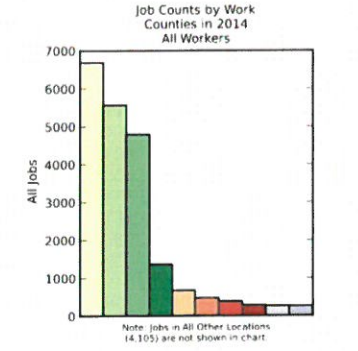
Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	18,197	100.0%
Vance County, NC	6,251	34.4%
Wake County, NC	3,306	18.2%
Granville County, NC	2,068	11.4%
Durham County, NC	1,257	6.9%
Mecklenburg County, NC	519	2.9%
Franklin County, NC	464	2.5%
Guilford County, NC	342	1.9%
Warren County, NC	309	1.7%
Orange County, NC	211	1.2%
Nash County, NC	210	1.2%
All Other Locations	3,260	17.9%

VANCE

GRANVILLE





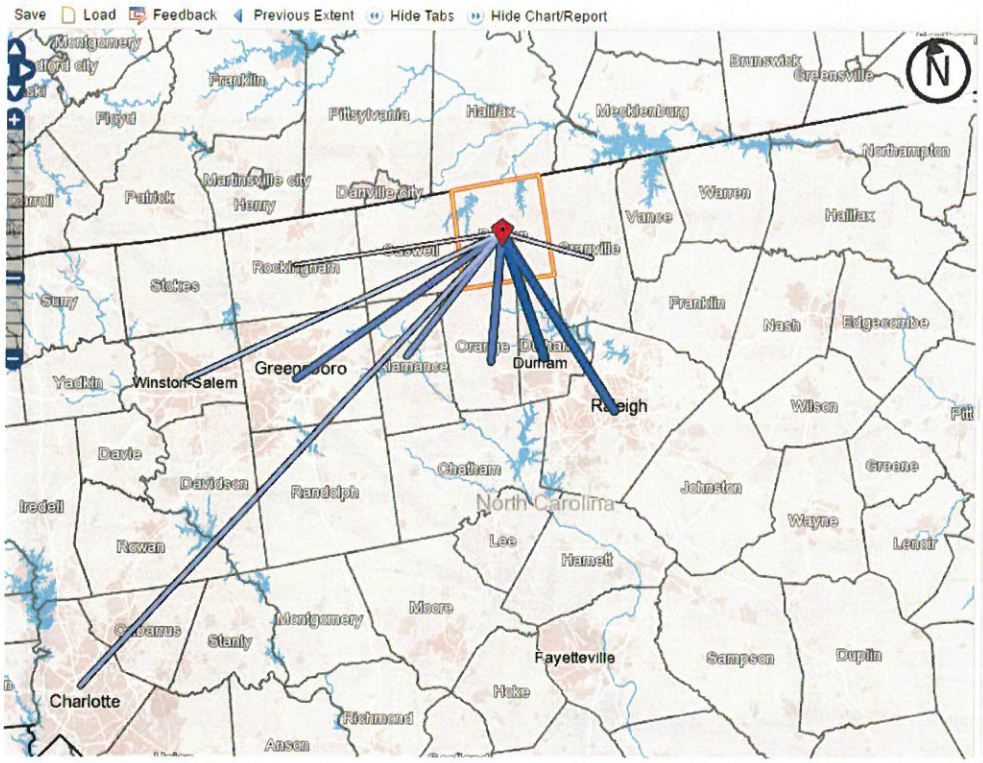
View as Bar Chart

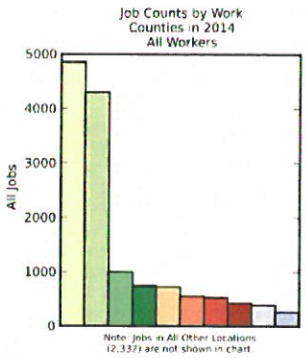
Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	24,868	100.0%
Wake County, NC	6,686	26.9%
Granville County, NC	5,570	22.4%
Durham County, NC	4,797	19.3%
Vance County, NC	1,367	5.5%
Mecklenburg County, NC	675	2.7%
Guilford County, NC	474	1.9%
Franklin County, NC	386	1.6%
Orange County, NC	283	1.1%
Nash County, NC	263	1.1%
Wilson County, NC	262	1.1%
All Other Locations	4,105	16.5%

Source: http://onthemap.ces.census.gov/ (Report pulled 6/30/2016)

Commuting Patterns for Workers Who Live in the Nine-County TRCPC Region, by County (Top Ten Destinations Listed)





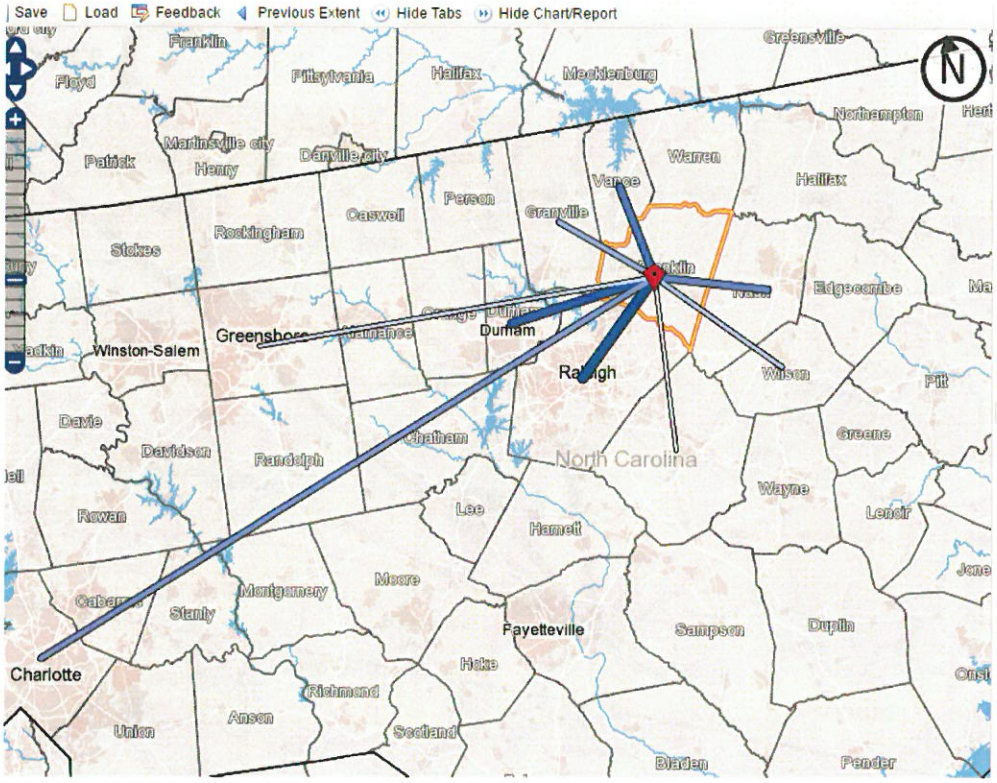
View as Bar Chart

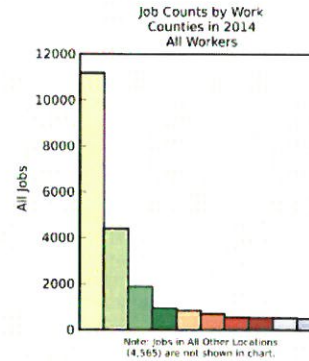
Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	16,116	100.0%
Person County, NC	4,856	30.1%
Durham County, NC	4,299	26.7%
Wake County, NC	1,001	6.2%
Orange County, NC	745	4.6%
Guilford County, NC	728	4.5%
Alamance County, NC	552	3.4%
Mecklenburg County, NC	529	3.3%
Forsyth County, NC	425	2.6%
Granville County, NC	391	2.4%
Rockingham County, NC	258	1.6%
All Other Locations	2,332	14.5%

PERSON ↑

FRANKLIN ↓





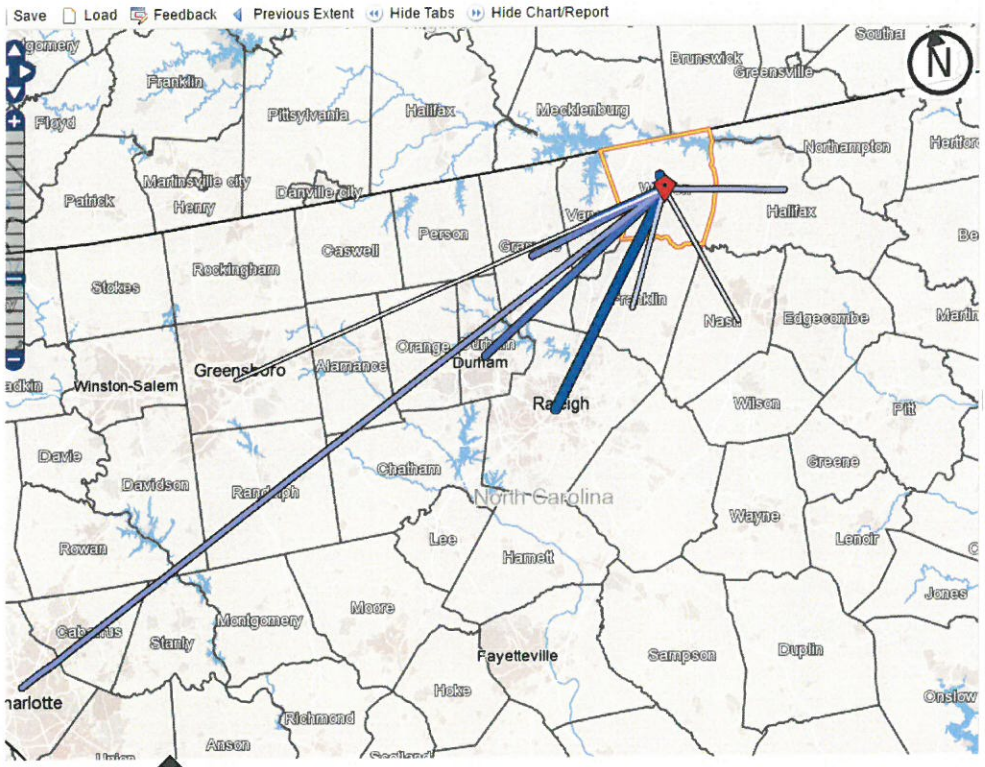
View as Bar Chart

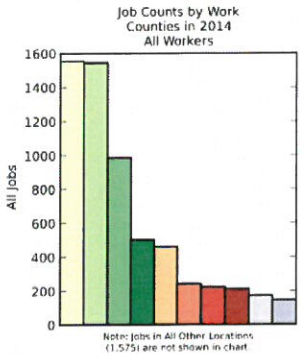
Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	26,639	100.0%
Wake County, NC	11,174	41.9%
Franklin County, NC	4,399	16.5%
Durham County, NC	1,890	7.1%
Vance County, NC	942	3.5%
Nash County, NC	844	3.2%
Mecklenburg County, NC	701	2.6%
Granville County, NC	544	2.0%
Wilson County, NC	535	2.0%
Guilford County, NC	532	2.0%
Johnston County, NC	513	1.9%
All Other Locations	4,565	17.1%

Source: http://onthemap.ces.census.gov/ (Report pulled 6/30/2016)

Commuting Patterns for Workers Who Live in the Nine-County TRCPC Region, by County (Top Ten Destinations Listed)





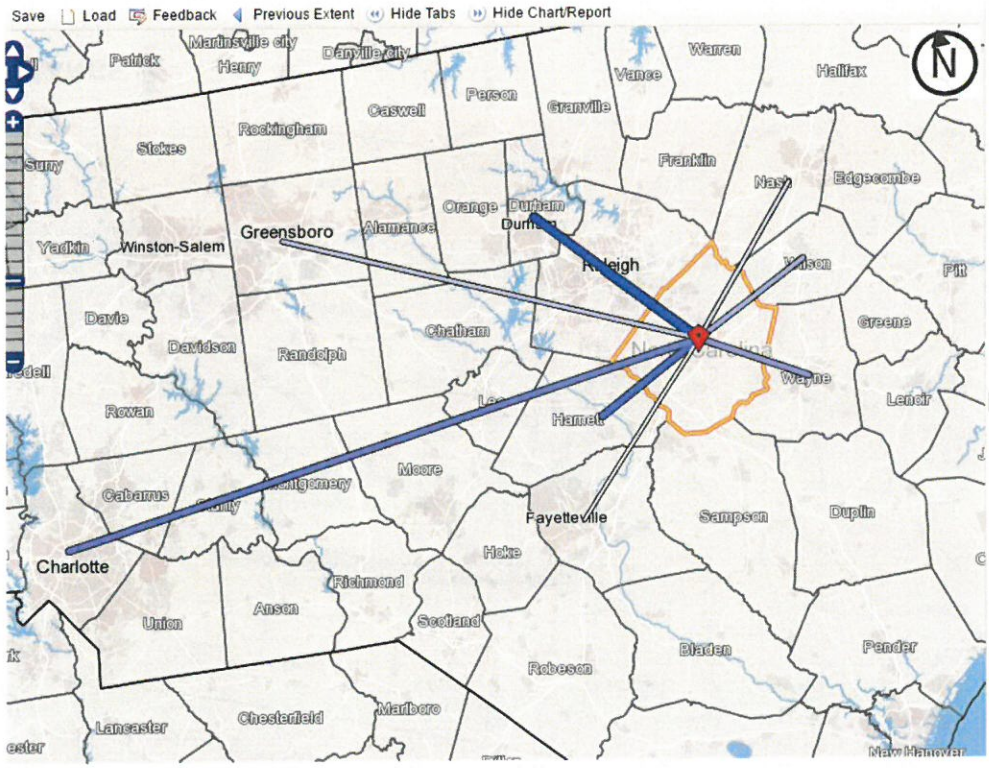
View as Bar Chart

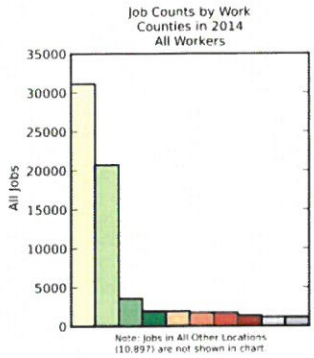
Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	7,624	100.0%
Wake County, NC	1,555	20.4%
Warren County, NC	1,545	20.3%
Vance County, NC	988	13.0%
Durham County, NC	502	6.6%
Granville County, NC	461	6.0%
Mecklenburg County, NC	242	3.2%
Halifax County, NC	224	2.9%
Franklin County, NC	214	2.8%
Nash County, NC	173	2.3%
Guilford County, NC	145	1.9%
All Other Locations	1,575	20.7%

WARREN

JOHNSTON





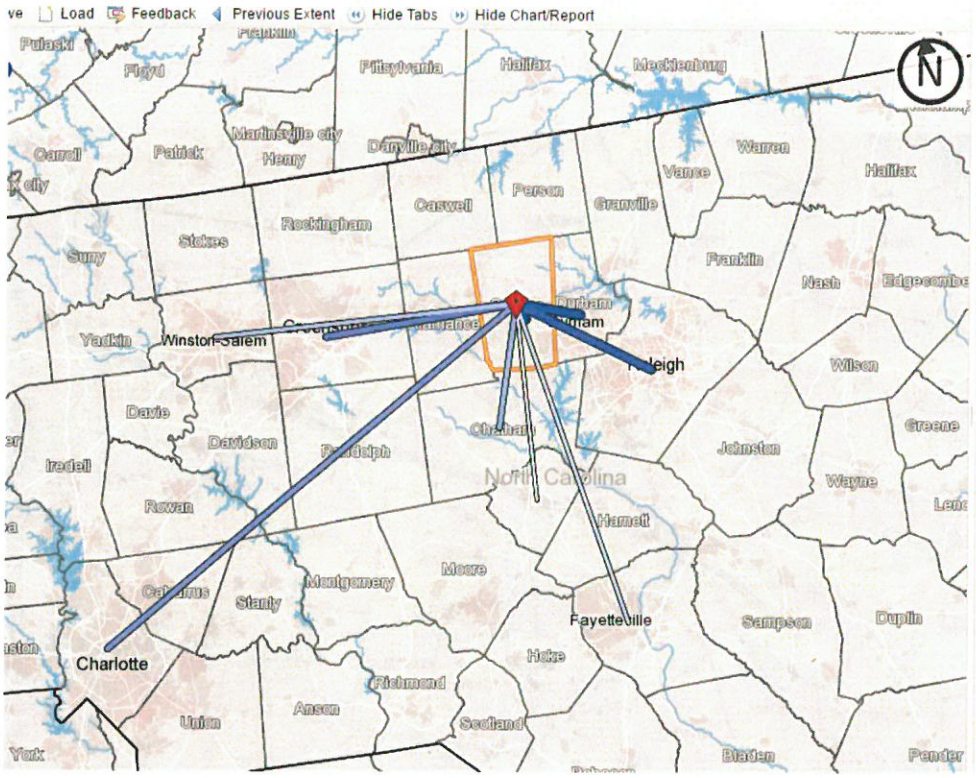
View as Bar Chart

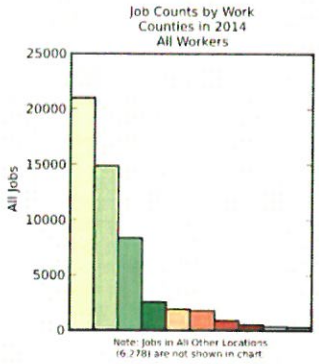
Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	77,348	100.0%
Wake County, NC	31,139	40.3%
Johnston County, NC	20,722	26.8%
Durham County, NC	3,570	4.6%
Harnett County, NC	1,965	2.5%
Mecklenburg County, NC	1,956	2.5%
Wayne County, NC	1,717	2.2%
Wilson County, NC	1,713	2.2%
Guilford County, NC	1,384	1.8%
Nash County, NC	1,151	1.5%
Cumberland County, NC	1,134	1.5%
All Other Locations	10,897	14.1%

Source: http://onthemap.ces.census.gov/ (Report pulled 6/30/2016)

Commuting Patterns for Workers Who Live in the Nine-County TRCPC Region, by County (Top Ten Destinations Listed)





View as Bar Chart

Jobs Counts by Counties Where Workers are Employed - All Jobs

	2014 Count	Share
All Counties	58,919	100.0%
Orange County, NC	21,010	35.7%
Durham County, NC	14,878	25.3%
Wake County, NC	8,367	14.2%
Alamance County, NC	2,577	4.4%
Guilford County, NC	1,927	3.3%
Mecklenburg County, NC	1,797	3.0%
Chatham County, NC	887	1.5%
Forsyth County, NC	530	0.9%
Cumberland County, NC	369	0.6%
Lee County, NC	299	0.5%
All Other Locations	6,278	10.7%

ORANGE ↑

Source: http://onthemap.ces.census.gov/ (Report pulled 6/30/2016)

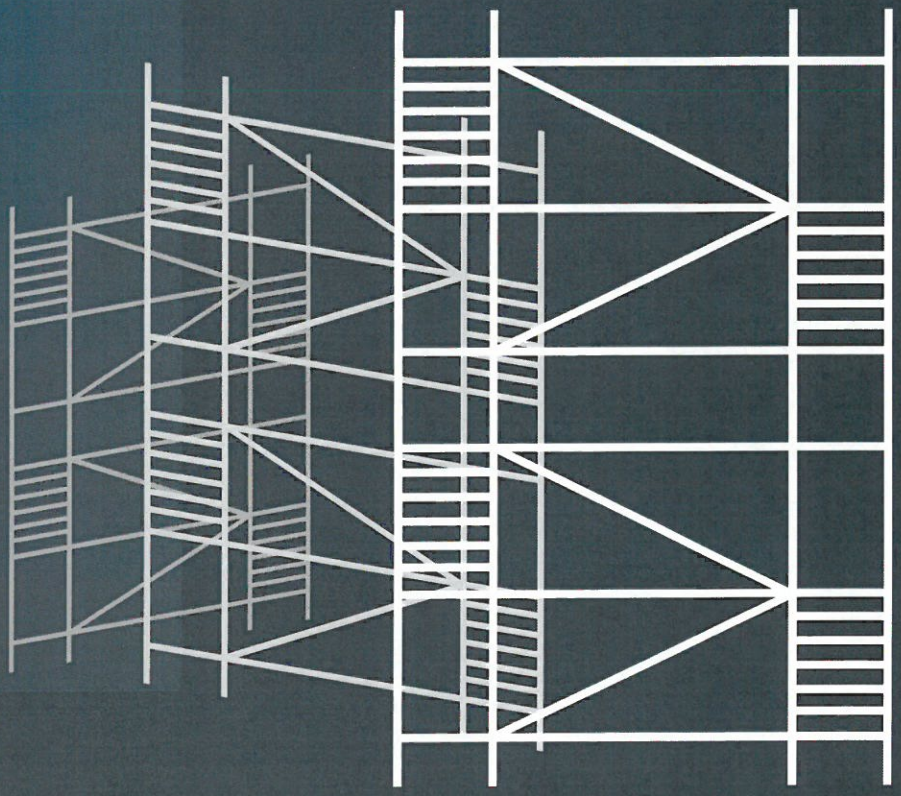
Attachment 4

STATE *of the* SOUTH

NORTH CAROLINA'S *Economic Imperative*

Building an Infrastructure of Opportunity

A REPORT FOR THE
JOHN M. BELK ENDOWMENT



Stalled upward economic mobility is persistent across North Carolina, not only in pockets of rural poverty but in the most dynamic urban areas. The imperative is clear: we need to build an infrastructure of opportunity to ensure all our citizens have a clear path to family-supporting work, that employers have the workforce they need to grow and innovate, and that our civic culture is one that supports prosperity for all.

ABOUT THE JOHN M. BELK ENDOWMENT

The John M. Belk Endowment is a private family foundation committed to creating a stronger North Carolina by improving access to postsecondary education for all students, increasing the number of students who complete postsecondary degrees and credentials, and ensuring that graduates can secure lifelong, family-sustaining employment. Founded in 1995 by John M. Belk and headquartered in Charlotte, North Carolina, the Endowment funds and partners with organizations that are leading the way for systemic change to better align education with workforce needs in a global economy through collaboration with educators, policymakers, employers and communities. For more information, please visit www.jmbendowment.org.

John M Belk Endowment
ELEVATE THROUGH EDUCATION

ABOUT MDC

MDC, a nonprofit based in Durham, N.C., brings together foundations, nonprofits, and leaders from government, business and the grassroots to build equity in the South through courageous conversations and systemic community solutions. Its approach—well-honed over nearly 50 years—uses research, consensus-building, and programs that bring together education, employment, and economic security. That work helps communities create an "Infrastructure of Opportunity"—the aligned systems and supports that can boost everyone, particularly those who've been left behind, to higher rungs on the economic ladder and contribute to local prosperity. For 20 years, MDC has published State of the South reports to further its mission of helping communities, organizations, and leaders close the gaps that separate people from opportunity. Learn more at www.mdcinc.org.

MDC

The John M. Belk Endowment and MDC would like to thank those who served on the Advisory Panel for this report. Your participation in discussing the issues was critical to helping us understand the challenge of economic mobility in North Carolina and in your communities. Having multiple points of view from the public, private, and nonprofit sectors gave us insights into the complexity of the issues across the state and a better perspective on the promising efforts now underway.

We also would like to thank the more than 100 community leaders we interviewed across the state to develop the community profiles included in this report (see Appendix B for a full list). Their insight allowed us to build a picture of what's happening in their diverse regions. Without their help, this report would not be as rich as it is.

In the most recent *State of the South* report, MDC called attention to "the distressing fact that it is harder in the South than anywhere else in the nation for someone born at the bottom of the income ladder to make it higher up the ladder as an adult." This report was motivated by a desire to better understand the implications of those alarming trends in North Carolina, but throughout this process we have also been inspired by the state's incredible resources and people who already are working to improve access to opportunity. We are fortunate in North Carolina to have a remarkable infrastructure of institutions—from our local school systems and workforce development groups, to our 58 community colleges, to the 16 campuses of the University of North Carolina system, as well as private colleges and universities—that are all dedicated to improving the lives of our people and the economies of the state, its regions, and our communities. It has taken many years to get to where we are, and in order to prepare for the new economy, we must connect the dots between systems, institutions, and people to build a true infrastructure of opportunity.

We hope this report encourages dialogue and action among leaders across the state, helping them see the challenges and work together to improve our economy and all of our citizens' ability to move up the economic ladder.

Kristy Teskey
Executive Director,
John M. Belk Endowment

David Dodson
President,
MDC

CULTIVATING ASPIRATIONS: VANCE, GRANVILLE, FRANKLIN & WARREN COUNTIES

THE PLACE:
A rural, four-county region with an intertwined history and economy, but limited access to family-sustaining work with career potential depending on proximity to the nearby dynamic metro area

THE CHALLENGE: A history of exploitive and low-wage work that influences expectations and aspirations for individual mobility and economic growth

ELEMENTS OF THE OPPORTUNITY INFRASTRUCTURE: Innovations in the K–12 sector; a community college presence in all four counties that links education and employment; a history of community organizing to address racial, economic, and environmental inequities

HISTORY AND CONTEXT: TOBACCO, TEXTILES, AND TRAVEL TIME

Stretching from the northeastern edge of the Research Triangle metro area along I-85 to the Virginia border, along the shores of Lake Kerr and Lake Gaston, the four-county region of Vance, Granville, Franklin, and Warren remains distinctly rural despite its proximity to one of the state's most economically dynamic areas. The region's economic history is archetypal North Carolina: tobacco and cotton farming, driven by slave-labor until the end of the Civil War, followed by a manufacturing and mill-based economy for much of the 20th century. Timothy B. Tyson explains the primacy of tobacco in the region's history in *Blood Done Sign My Name*:

> *Tobacco put food on our tables, steeples on our churches, stains on our fingers, spots on our lungs, and contradictions in our hearts.*

A hundred years after the fall of slavery, C.G. Credle Elementary School still didn't open until mid-September, after the farm children were finished 'priming' and 'putting in' tobacco—picking the leaves and hanging them in wood-fired barns to cure. Bright golden leaves blew off the trucks and littered the streets every autumn.

While the agricultural and manufacturing engines of commerce created immense wealth for owners and managers, and stable employment for many workers, their legacy presents unique challenges for broadening economic opportunity in the region today. These four counties have an intertwined history—both political and economic—and face a similar fate today: they must build stronger pathways to postsecondary education and careers, and they must change the conversation about persistent poverty and what kinds of community investments are possible.

In 1860, 28,563 people in the region, or 54 percent of the total population, were enslaved people. There were more slaves in Granville County than in any other county in North Carolina, and in Warren County, the slave population was twice that of the white population—the highest ratio in the state. Free African Americans, often masons and other skilled laborers, made up another four percent of the population.[1]

Vance County was created in 1881 from portions of Granville, Franklin, and Warren counties in order to concentrate the black Republican vote, part of post-Reconstruction efforts to disenfranchise black voters. By the turn of the 20th century, Jim Crow laws were in full effect, and the legal, social, and economic rights of African Americans in the area were significantly constrained.

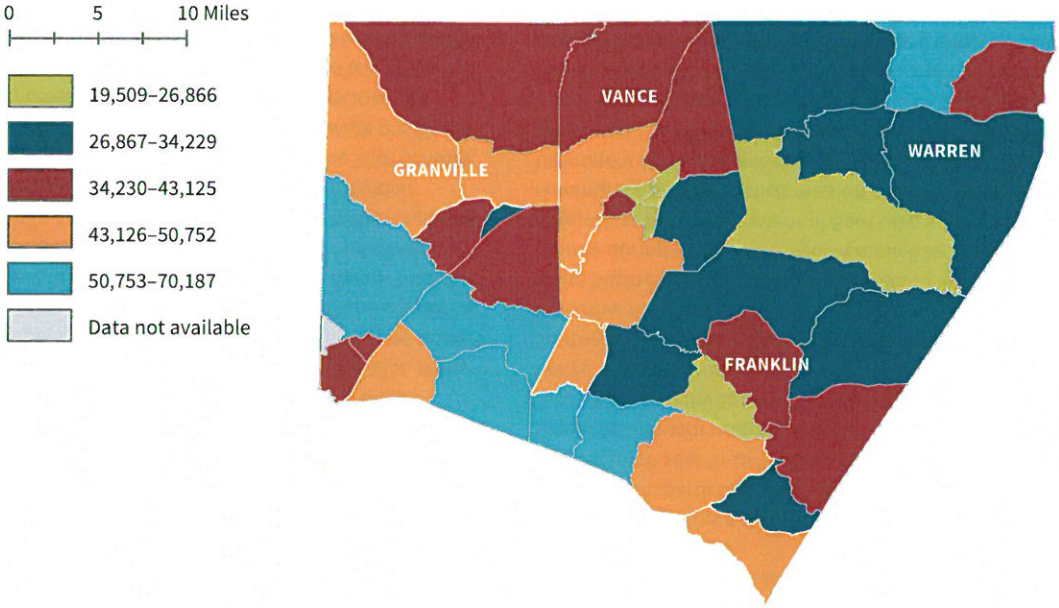
Political changes were simultaneous with economic ones. When enslaved people were freed at the end of the Civil War, many became sharecroppers, an exploitative system in which land owners provided land and resources to farmers in exchange for a significant portion of the crop. Shifts at the turn of the century meant that the regional economy was no longer solely agricultural; Henderson Cotton Mill opened in 1896 in Vance County, and its owners opened the Harriet Mill across town in 1901. While the mills provided substantial employment in the region throughout the 20th century, black workers were only considered for the lowest-wage positions, and that economy created inequity by keeping wages low. The textile workers unionized in the 1940s, and a strike in the 1950s led to extended mill closures and violence, with the strikers eventually mostly replaced by new workers.[2]

Between 1910 and 1970, six million African Americans left the South—mostly from rural communities— in search of economic opportunity and to escape oppressive Jim Crow conditions. This massive population shift, known as the Great Migration, was felt in Vance, Granville, Franklin, and Warren counties: between 1950 and 1970, the African American population in the region decreased by nearly 10,000 people, or 16 percent. While the prospect of jobs and upward mobility certainly pulled people to the North, many felt themselves pushed away from the communities they called home because of entrenched racism, legalized segregation, and white supremacist violence.

The area also has a strong history of community organizing and activism, particularly civil rights organizing. After the racially motivated murder in 1970 of Henry Marrow, a young African-American Vietnam veteran, in Oxford, N.C. (the subject of Tim Tyson's *Blood Done Sign My Name*), Benjamin Chavis, an Oxford native who was then the statewide youth coordinator for the Southern Christian Leadership Conference (SCLC) and later the executive director of the NAACP, organized a boycott of the town's white businesses that pressured leaders to integrate. In Warren County during the 1970s, Floyd McKissick led a different kind of organizing: the development of Soul City, a planned multi-racial community with an explicit mission of black empowerment. Ultimately, the economic downturn and political opposition prevented Soul City's completion. While Soul City did not flourish into the thriving community that McKissick and others envisioned, the infrastructure continues to be used, and it created organizing energy that continued in the region.[4] For example, in the early 1980s, when the N.C. Department of Environment and Natural Resources decided to build a PCB landfill in Warren County, the community responded with protests against the significant public

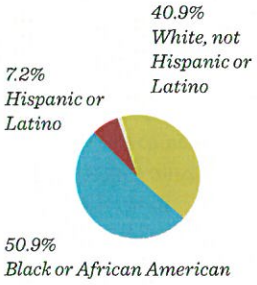
[1] "The Spread of U.S. Slavery, 1790–1860," Lincoln Mullen, interactive map, http://lincolnmullen.com/projects/slavery; [2] "Harriet-Henderson Cotton Mills Strike," Maurice C. York, NCPedia, 2006. http://ncpedia.org/harriet-henderson-cotton-mills-stri; [3] Accessed November 2015: http://www.gisforhistory.org/projects/greatmigration/#; [4] "The Time Republicans Helped Build an All-Black Town Called 'Soul City'," Brentin Mock, *CityLab*, November 2015. http://www.citylab.com/politics/2015/11/the-time-republicans-helped-build-an-all-black-town-called-soul-city/414585

Vance, Granville, Franklin, and Warren Counties Median Household Income



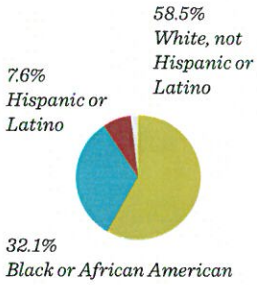
North Central Region: Vance County

Population (2014, est.)	**44,614**
Population growth (2010–2014)	-1.8%
Job growth (2010–2014)	-8.2%
Job growth, 2014–2024 (proj.)	12.6%
Employment to population rate, 2014 (est.)	49.2%
Unemployment rate, 2014	11.7%



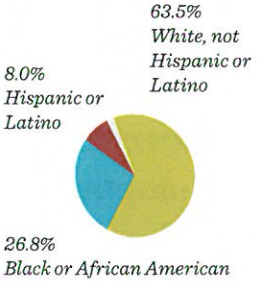
North Central Region: Granville County

Population (2014, est.)	**58,500**
Population growth (2010–2014)	1.7%
Job growth (2010–2014)	4.0%
Job growth, 2014–2024 (proj.)	14.5%
Employment to population rate, 2014 (est.)	51.2%
Unemployment rate, 2014	10.0%



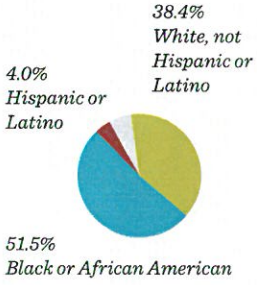
North Central Region: Franklin County

Population (2014, est.)	**62,860**
Population growth (2010–2014)	3.7%
Job growth (2010–2014)	7.4%
Job growth, 2014–2024 (proj.)	17.9%
Employment to population rate, 2014 (est.)	53.5%
Unemployment rate, 2014	12.1%



North Central Region: Warren County

Population (2014, est.)	**20,231**
Population growth (2010–2014)	-3.5%
Job growth (2010–2014)	-14.9%
Job growth, 2014–2024 (proj.)	13.0%
Employment to population rate, 2014 (est.)	42.1%
Unemployment rate, 2014	9.6%



For data sources and a comparison to statewide data, please see page 90.

What are the chances a child **raised in the lowest quintile** of the income distribution will move to another quintile as an adult?

Raleigh Commuting Zone (*Chatham, Durham, Franklin, Granville, Harnett, Johnston, Lee, Orange, Person, Wake*)

Lowest quintile	**39%**
Lower Middle Quintile	**30%**
Middle Quintile	**17%**
Upper Middle Quintile	**10%**
Highest Quintile	**5%**

Henderson Commuting Zone (*Vance, Warren*)

Lowest quintile	**43%**
Lower Middle Quintile	**29%**
Middle Quintile	**17%**
Upper Middle Quintile	**7%**
Highest Quintile	**3%**

health risks. Hundreds were arrested. Because the area was predominantly African American and low-wealth and the conditions at other sites would have been more environmentally responsible, the decision to locate the landfill there led Benjamin Chavis to start using the term "environmental racism."[5]

THE CHALLENGE: SOUTHERN ISOLATION

Today, parts of Granville and Franklin counties have become bedroom communities for the Triangle—part of the halo of one of the fastest growing metros in the U.S. The labor markets of the areas blend together, potentially creating more diverse job opportunities for residents. Vance and Warren counties, while not impossibly far for determined commuters, retain their largely rural character. After centuries of economic structures that allowed few chances of upward mobility and wealth building for the majority of residents, particularly African Americans, the area continues to have high levels of inequality and poverty, especially in Vance and Warren. Unemployment is high, and for those who do have jobs, median wages are low. Educational attainment, which was unnecessary for earlier manufacturing employment, is much lower than state and national averages: only 18 percent of adults in Vance County and 20 percent in Warren County have a two-year degree or higher.[6] The area also faces significant health challenges, an indication that economic change has left many in the region behind and dramatically reduced wellbeing. According to County Health Rankings, Vance County ranks 98th in North Carolina (out of 100) in an index of health factors, including health behavior, access to care, and social and economic factors. Warren County is ranked 92nd, while Franklin and Granville are ranked higher (53rd and 43rd, respectively).[7] In Vance and Warren, 20 percent of people were uninsured in 2015, almost twice the national average (though that figure is down from 25 percent in 2013). In Franklin and Granville, 15 percent were uninsured.[8]

In the mill economy there were large disparities between the wealth of the managerial level and the subsistence of the workers. While the mill economy created many problems and deepened inequality, it did provide employment stability for many residents. When the mills closed, many of the affluent people left the area, and displaced workers were stuck with limited job opportunities and no transferrable skills. Once it became clear that the mill jobs were not coming back, decline set in. Many people in once-thriving neighborhoods full of old mill houses fell into poverty; not much later, a perception that they were blighted and filled with crime fed a cycle of disinvestment that lowered property values and diminished the tax base. According to Terry Garrison, a Vance County commissioner, "This area has an image problem that affects business recruitment." Too many years with a culture of resignation, one where the traditional economic elite watched things happen rather than making things happen, took a toll.

This rapid decline has created a sense that poverty is an intractable problem. "There is such a tremendous amount of apathy, with people focused on 'me and mine,'" says Paul Ross, director of the YMCA in Henderson. Many people of means have left the area or disengaged, according to Ross, creating a lack of resources and leaving the community fragmented. "In place of Southern hospitality, we have Southern isolation," says Harry Mills, director of the Granville County Economic Development Department. In parts of the region, many affluent families have enrolled their children in private schools. In this environment, young people growing up in low-income families aren't getting much positive reinforcement from the community. People make assumptions about who is worthy of respect based on their appearance. "We assume that because people look a certain way, they don't deserve attention and respect," says Jackie Sergent, mayor of Oxford. The sense of apathy, fragmentation, and disconnection has only exacerbated the community's problems. "Too many people seem paralyzed by past failures—we aren't spending enough time lifting up current success stories," says Dr. Anthony Jackson, the new superintendent of Vance County schools. In Dr. Jackson's view, this mindset is the first thing that needs to change.

THE STRATEGY: BIG ASPIRATIONS AND INNOVATION FOR EDUCATION

Many of the region's visible challenges, including health outcomes, drug dependence, and vacant residential and commercial properties, will be difficult to change without economic development, and businesses are unlikely to invest in the area if

[5] "How the Collapse of 'Soul City' Fired Up the Environmental Justice Movement," Brentin Mock, *CityLab*, November 2015. http://www.citylab.com/politics/2015/11/how-the-collapse-of-soul-city-fired-up-the-environmental-justice-movement/415530; [6] U.S. Census Bureau, American Community Survey; [7] County Health Rankings, A Robert Wood Johnson Foundation program, http://www.countyhealthrankings.org; [8] "Changing Uninsured Rates by County — From 2013 to 2015," Enroll America, interactive map. https://www.enrollamerica.org/research-maps/maps/changes-in-uninsured-rates-by-county

Equity Indicators: Vance County

Poverty rate	**25.5%**
White, not Hispanic or Latino	14.4%
Black or African American	33.2%
Hispanic or Latino	36.1%
Median household income (in 2014 dollars), 2010–2014	**$34,075**
White, not Hispanic or Latino	$47,841
Black or African American	$26,354
Hispanic or Latino	$36,222
Family-supporting wage per hour (gross), 2014	$21.09 ($43,863)
Jobs paying above a family-supporting wage, 2014	21.8%
Average earnings per job, 2015	$37,892
Postsecondary educational attainment (25+) Total population, 2010–2014	**20.5%**
White, not Hispanic or Latino 2011–2013	24.6%
Black or African American, 2011–2013	16.6%
Hispanic or Latino	N/A

Equity Indicators: Granville County

Poverty rate	**15.8%**
White, not Hispanic or Latino	11.2%
Black or African American	22.8%
Hispanic or Latino	35.9%
Median household income (in 2014 dollars), 2010–2014	**$49,655**
White, not Hispanic or Latino	$54,574
Black or African American	$36,336
Hispanic or Latino	$45,435
Family-supporting wage per hour (gross), 2014	$21.56 ($44,848)
Jobs paying above a family-supporting wage, 2014	20.4%
Average earnings per job, 2015	$50,183
Postsecondary educational attainment (25+) Total population, 2010–2014	**27.0%**
White, not Hispanic or Latino 2011–2013	30.0%
Black or African American, 2011–2013	19.2%
Hispanic or Latino	N/A

Equity Indicators: Franklin County

Poverty rate	**15.4%**
White, not Hispanic or Latino	11.5%
Black or African American	22.6%
Hispanic or Latino	26.7%
Median household income (in 2014 dollars), 2010–2014	**$42,763**
White, not Hispanic or Latino	$51,949
Black or African American	$27,497
Hispanic or Latino	$36,545
Family-supporting wage per hour (gross), 2014	$22.40 ($45,594)
Jobs paying above a family-supporting wage, 2014	18.9%
Average earnings per job, 2015	$44,119
Postsecondary educational attainment (25+) Total population, 2010–2014	**28.2%**
White, not Hispanic or Latino 2011–2013	32.3%
Black or African American, 2011–2013	18.7%
Hispanic or Latino	N/A

Equity Indicators: Warren County

Poverty rate	**24.8%**
White, not Hispanic or Latino	16.2%
Black or African American	28.7%
Hispanic or Latino	36.7%
Median household income (in 2014 dollars), 2010–2014	**$34,953**
White, not Hispanic or Latino	$47,552
Black or African American	$27,555
Hispanic or Latino	$31,406
Family-supporting wage per hour (gross), 2014	$20.92 ($43,511)
Jobs paying above a family-supporting wage, 2014	22.5%
Average earnings per job, 2015	$36,849
Postsecondary educational attainment (25+) Total Population, 2010–2014	**21.6%**
White, not Hispanic or Latino 2011–2013	30.5%
Black or African American, 2011–2013	13.8%
Hispanic or Latino	N/A

Family-Supporting Wage Occupations with Significant Projected Growth, 2014 – 2024 Franklin, Vance, Warren, and Granville Counties

Family-supporting wage for one adult, one child — $22.40 (Franklin), $21.09 (Vance), $20.92 (Warren), $21.56 (Granville)

SOC	Description	2014 Jobs	2024 Jobs	2014–2024 Change	2014–2024 % Change	Median Hourly Earnings	Typical Entry Level Education
29-1141	Registered Nurses	1,012	1,169	157	16%	$27.16	Associate's degree
11-1021	General and Operations Managers	620	759	139	22%	$48.45	Bachelor's degree
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	468	573	105	22%	$24.22	High school diploma or equivalent
49-9041	Industrial Machinery Mechanics	202	271	69	34%	$21.84	High school diploma or equivalent
43-1011	First-Line Supervisors of Office and Administrative Support Workers	424	489	65	15%	$21.03	High school diploma or equivalent
51-1011	First-Line Supervisors of Production and Operating Workers	410	475	65	16%	$26.27	Postsecondary non-degree award
13-2011	Accountants and Auditors	341	404	63	18%	$28.26	Bachelor's degree
25-1099	Postsecondary Teachers	453	509	56	12%	$25.47	Doctoral or professional degree
13-1199	Business Operations Specialists, All Other	339	391	52	15%	$27.63	High school diploma or equivalent
15-1132	Software Developers, Applications	99	149	50	51%	$36.69	Bachelor's degree

they do not see people with the skills they need or the potential of local training systems to adapt and provide those skills. "There is an undeniable connection between education, health, and economic status, and those collectively impact the local economy," says Val Short, with Triangle North Healthcare Foundation. While leaders want to attack those issues from every angle they can, including expanding health care access and quality, one of their biggest priorities is to find innovative ways to improve education outcomes and prepare people for work.

For that to happen, pathways to economic opportunity need to be concrete and accessible, but there is also, as Dr. Jackson says, a mindset change needed. "Being poor doesn't relegate you to being unsuccessful," says Carolyn Paylor, executive director of Franklin-Granville-Vance Smart Start. Young people in the community need to know that their future matters and that the community wants them to succeed; poverty is not an excuse to give up on them. Rather than imposing limitations on what they can achieve, their aspirations should be cultivated. In order to really change the prospects for the community's youth, leaders need to reduce apathy and the sense of individualism. "Everybody blooms with connectedness," says Oxford Mayor Jackie Sergent.

Along with shifting the culture toward more collective concern for community well-being, strategic improvements in the education-to-career continuum are being made, especially in Henderson and Vance County, where they are desperately needed. In Vance County Schools, where 91 percent of students are eligible for free or reduced-price lunch, and the 2013 graduation rate was 65 percent (much lower than the state average of 83 percent),[9] there is new energy for reform. Several new programs to provide students with additional pathways to career success are underway: two career academies, one focused on medicine and another on fire and public safety, as well as an alternative high school for students who were not successful at the county's other high schools. "We decided we needed to do something to give kids hope," Eric Pierce, the principal at the alternative high school, told WUNC-FM in an October 2015 interview.[10] That school, Western Vance High School, has had a 100 percent graduation rate for the past few years; students stay until they meet the graduation requirements.

Along with other leaders in the region, Superintendent Jackson is committed to changing the conversation about student success. "We are waiting for some magic bullet program, but it's really about building the capacity of our parents, about teaching them how to advocate for their kids to get the most out of parent-teacher conferences," he says. Since he started as superintendent, he looks

[9] North Carolina School Report Cards, http://www.ncschoolreportcard.org; [10] "Perils And Promise: Educating North Carolina's Rural Students," Leoneda Inge, WUNC, October 2015. http://wunc.org/post/perils-and-promise-educating-north-carolinas-rural-students#stream/0

around and sees students, parents, and teachers who are trying in spite of difficult circumstances—and he sees many who are succeeding. He wants to make sure all students receive the support they need, even those who don't match what people imagine as a "typical" successful student.

The changes at Vance County Schools echo those of Henderson Collegiate, a charter school that opened in 2010. Current enrollment is at 620 students, and it is adding grade levels every year; 94 percent of its students are African American or Hispanic, and 86 percent qualify for free or reduced-price lunch. Eric Sanchez, who founded the school with his wife, Carice Sanchez, is a former teacher in Vance County Schools. He saw a troubling divide when he taught there—the students who started out in kindergarten less prepared than their peers just fell further and further behind every year, while students whose parents knew how to support their learning and had the time and skills to advocate were well served, often by the Academically Gifted program. Sanchez was distressed by this achievement gap, and particularly by the unspoken assumption that many students would never be successful.

At Henderson Collegiate, Sanchez and his staff are creating a culture that sets clear expectations for all students to succeed. Their students' test scores are higher than North Carolina averages, and they even exceed the average state scores for students who are not economically disadvantaged, defying many people's assumptions about who can succeed in school. Henderson Collegiate will graduate its first students in 2019 and the school is carefully planning ways to support students as they select and transition to college. Each high school grade will have its own college counselor, and the school is starting to build relationships with colleges that have their own support programs for first-generation students. Talk of college is infused into everything, from the school's name to classroom walls where teachers proudly display pennant flags from their alma maters. But they also know that students need a clear and concrete path to get there. Classes are structured to "provide immediate attainability of incremental goals," says Sanchez, and both individual and collective learning are celebrated. One eighth grade student showed us a tally of points for reading books of their choice from the class library beyond those assigned; she was the frontrunner, but one of her classmates was quick to point out that "it's about more than just the points—it's about building knowledge, because knowledge is power, and power is freedom." In the afternoon, bulletin boards in the hallway display quality work completed that same morning. A test was displayed with a note from the student at the bottom, "Did I crush this test?" The teacher had checked yes.

Henderson Collegiate's commitment to educating students from low-wealth families distinguishes it from a large number of charter schools in the state. Because state funding for charter schools can't be used for transportation and food, many charter schools do not provide buses or lunch, which are huge expenses. Those are necessities for many families in the area; parents who work in low-wage jobs are unlikely to have the schedule flexibility to drive their kids to school every day, and some may not even have consistent access to a car. With 29 percent of children in the county food insecure, many families rely on school meals for their children's nutrition.[11] Henderson Collegiate does provide transportation and meals and sees them as mission-critical, but it takes significant effort to obtain grants large enough to cover those expenses. "The state funding model could be adapted to ensure that charter schools can and will be accountable for educating low-income students," says Sanchez. While the people of this region need an entire system of public schools that provides a quality education at scale, Henderson Collegiate is proving that low-income is not synonymous with low achievement.

[11] "Food Insecurity: Data by County," Feeding America. http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/data-by-county-in-each-state.html

The region's education landscape is anchored by the area's community college, which serves all four counties. The role of community colleges, particularly in rural areas, extends far beyond the academic. In this region, as in many other rural regions, the community college is the only postsecondary institution, and in that role it serves as a workforce trainer, leading employer, community convener, cultural ambassador, and change agent. In each of these capacities, community colleges are positioned to make significant contributions to the overall improvement of the community's health. "Vance-Granville Community College (VGCC) has the capacity and flexibility to do almost anything this area needs in education and workforce development," says Linda Worth, the county manager in Warren County. With its main campus in Henderson and campuses in each of the four counties, VGCC is a central part of nearly every educational and career pathway in the area, and diverse offerings and partnerships have cemented it as a hub of education, workforce development, and regional advancement. "One of the most valuable assets we have is Vance-Granville Community College," says Oxford Mayor Jackie Sergent.

VGCC has partnered with the local school systems to establish early-college programs in each of the four counties. Students enroll at the start of high school and graduate with a two-year degree, or college credit, within five years. VGCC is also partnering with four-year institutions to ensure students have an array of degree options and clear academic pathways; through a partnership with North Carolina Central University (NCCU), students can complete a Bachelor of Science degree in Criminal Justice on the VGCC campus.[12] In addition to preparing students to transfer and pursue additional education, VGCC is working to align the training with the needs of local employers. VGCC has identified employers with specific skill needs and included them in program design to ensure students have desired technical skills. As a result, two campuses have biotechnology labs where a "BioWork" Process Technician training course is offered through the continuing education program to prepare students for careers as process technicians within bioprocess, pharmaceutical, or chemical manufacturing companies; there is also a bioprocessing technician degree program offered. A momentous new program at VGCC is the mechatronics engineering technology degree, which prepares students for highly technical jobs in industrial maintenance and manufacturing and relies on important partnerships with local employers and the career and technical education programs in the high schools. That program was made possible with funding from the U.S. Department of Labor through the Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant Program, which also allowed VGCC to expand the welding program to an associate degree level. "We need to make sure students have multiple educational pathways and our employers can find people with the skills they need," says Harry Mills, director of the Granville County Economic Development Commission.

"There are many options other than four-year college," says Ronnie Goswick, director of the Franklin County Economic Development Commission. Given the blending of the local labor market with the neighboring metro area, VGCC is focused on equipping students with varied skills so they can work locally or compete for jobs with the highly educated population in the Research Triangle.

NEXT STEPS: ORGANIZING AROUND A VISION

Pockets of innovation and excellence in the region show what is possible for the future. The K–12 school systems and Vance-Granville Community College are working to ensure educational pathways are robust and the local workforce attracts and grows diverse businesses, and the Kerr-Tar Youth Council, coordinated by the Kerr-Tar Regional Council of Governments, plans employment and training programs for youth in the region. But the region still needs strong collaborative leadership to organize around a vision for the future economy. Far too many families in this area—and even entire communities—struggle to make ends meet with limited resources. Even with a comparatively low cost-of-living, it is difficult to get by on the minimum wage, and it is practically impossible to build wealth and invest in your family's future. Positioned in the Triangle's outer ring, many of the area's residents will have better luck finding family-supporting work if they are able to commute, but only if local education and training systems prepare them well. And even with sufficient training, low-income people will be at a disadvantage because of inconsistent access to transportation.

Given the complex nature of the problems facing this region—problems that are too big for any one organization to tackle—it will take long-term, cohesive planning by a multi-sector group of leaders to strengthen opportunities for upward mobility. "Because we have limited resources, we need to coalesce around a common vision," says Dr. Stelfanie Williams, president of Vance-Granville Community College. That common vision and the structures for collaboration and alignment between institutions do not currently exist, but they will need to emerge for the region to improve outcomes at scale. Achieving those goals will require broad alliances, including the involvement of employers, which has been difficult as the economy has restructured. Additional investment in the capacity of local nonprofits and civic organizations is also needed so that they better address issues that prevent educational progress and career connection.

Local leaders must also continue their work to change the conversation about poverty and who is likely to succeed. "We can't allow poverty to be an excuse for not providing opportunity," says Superintendent Jackson. Changing that mentality will take inclusive planning strategies: rather than creating a regional vision for low-income people, they must do it in partnership with them. After centuries of exploitative economic conditions, it is time for the region's people to share ownership of the region's economic transition and their future. As Lisa Harrison, director of the Granville Vance District Health Department, says, "We need to make it clear that this region values people and economic growth: those aren't competing priorities."

[12] "NCCU, Vance-Granville Community College Launch Program," North Carolina Central University. http://www.nccu.edu/news/index.cfm?id=EBDEA1EC-15C5-F8D8-3A58DAA8180498CC

Advanced manufacturing/skilled trades in-demand occupations cited at the November 17 meeting, organized by the agreed-upon pathways and crosswalked with O*NET, using lay titles search engine, for the purpose of comparing with labor market data and assessing common KSAs and competencies.

Pathway	Job titles provided by professionals	Job titles crosswalked with O*NET (with SOC code)
Production pathway	***Entry level***	
	Manufacturing technicians (bioMerieux)	• Manufacturing production technicians (17-3029.09) • Industrial engineering technicians (17-3026)
	Machine operators (Avintiv, Dill)	• Multiple machine tool setters, operators, and tenders, metal and plastic (51-4081) • Computer-controlled machine tool operators, metal and plastic (51-4081)
	Mid level	
	Mechatronics assemblers (Bell)	• Mechatronics engineers (17-2199.05))
	Maintenance electronic technicians (Avintiv)	• Electronics engineering technicians (17-3023.01)
	Technical technicans (Parata)	• Sales representatives, wholesale and manufacturing, technical and scientific products (41-4011)
	Advanced	
	Final systems technicians (Bell)	• Electronic engineering technicians (17-3023.01)
	Electronic technicians (Bell)	• Electronic engineering technicians (17-3023.01)
QA pathway	***Mid level***	
	QA lab technician (Avintiv)	• Quality control analysts (19-4099.01)
R&D/process development pathway	***Mid level***	
	Operations and maintenance supervisor (Waste)	• First-line supervisors of mechanics, installers, and repairers (49-1011)
	Network Customer Service (Parata)	• Network and computer systems administrators (15-1142) • Computer network support specialists (15-1152)
	Advanced	
	Design engineer (Dill)	• Mechanical engineers (17-2141)
	Process engineer (bioMerieux)	• Materials engineers (17-2131)

Advanced manufacturing/skilled trades in-demand occupations cited at the November 17 meeting, organized by the agreed-upon pathways and crosswalked with O*NET, using lay titles search engine, for the purpose of comparing with labor market data and assessing common KSAs and competencies.

Maintenance pathway	***Entry level***	
	Facility maintenance technician (bioMerieux)	• Maintenance and repair workers, general (49-9071)
	Preventative maintenance technician (Waste)	• Maintenance workers, machinery (49-9043)
	Mid level	
	Heavy equipment technician (Waste)	• Mobile heavy equipment mechanics, except engines (49-3042)
	Advanced	
	Maintenance general mechanic (Avintiv)	• Maintenance workers, machinery (49-9043)
Construction pathway	***Entry level***	
	Heavy equipment operator (Waste)	• Operating engineers and other construction equipment operators (47-2073)
Operations pathway	***Advanced***	
	Software developer (Parata)	• Software developers, system software (15-1133)
	Procurement professional (Parata)	• Pu asin ents 3 023
Logistics pathway	***Mid level***	
	Drivers (Waste)	• Heavy and tractor-trailer truck drivers (53-3032)

Industry Snapshot of Manufacturing in Kerr-Tar WDB Region

		Current		Historical			Forecast			Forecast	
		Four Quarters Ending with 2016q1		Total Change over the Last 5 Years	Average Annual % Change in Employment 2011q1-2016q1		Over the Next 5 Years			Over the Next 10 Years	
NAICS	Industry	Employment	Avg. Annual Wages	Employment	Kerr-Tar WDB Region	North Carolina	Total Approx Repl Demand	Total Growth Demand		Total Approx Repl Demand	Total Growth Demand
31	Manufacturing	10,644	$50,973	406	0.8%	1.3%	1,203	-604		2,333	-1,173
	Total - All Industries	66,816	$36,681	1,360	0.4%	1.8%	8,152	494		16,294	991

Source: JobsEQ®
Data as of 2016Q1
Note: Figures may not sum due to rounding.
Exported on: Thursday, June 30, 2016 4:53 PM

Industries

Attachment 7

	num Adult Entered Employment	Adult Entered Employment	Adult Avg Earnings	Adult Earnings Change	DW Avg Earnings	DW Earnings Change	num DW Entered Employment	DW Entered Employment
All NAICS Code Post	3,210	64.0%	$17,103	($2,255)	$18,510	($2,908)	2,171	66.7%
Accommodation and Food Services	201	82.0%	$8,950	($1,202)	$9,114	($3,732)	102	83.6%
Administrative and Support and Waste Management and Remediation Services	746	87.9%	$15,085	($2,260)	$15,766	($2,827)	512	85.0%
Agriculture, Forestry, Fishing and Hunting	4	50.0%	$12,671	($4,419)		($17,930)	1	100.0%
Arts, Entertainment, and Recreation	27	87.1%	$12,113	($6,085)	$13,961	($7,122)	19	79.2%
Construction	164	86.3%	$16,563	($887)	$18,534	($483)	110	86.6%
Educational Services	160	92.0%	$14,788	($2,609)	$14,780	($3,863)	105	84.0%
Finance and Insurance	102	93.6%	$25,316	($4,205)	$25,642	($1,483)	74	87.1%
Health Care and Social Assistance	321	87.9%	$13,186	($1,065)	$15,344	($1,697)	228	88.0%
Information	77	88.5%	$24,726	($1,539)	$22,863	$1,264	52	89.7%
Management of Companies and Enterprises	14	73.7%	$23,748	$1,417	$31,927	($2,010)	11	78.6%
Manufacturing	181	93.8%	$23,048	($2,737)	$22,100	($85)	84	80.0%
n/a	49	3.4%	$19,523	($1,453)	$16,666	($6,722)	35	4.7%
Other Services (except Public Administration)	64	86.5%	$13,449	($3,135)	$15,596	($5,406)	45	83.3%
Professional, Scientific, and Technical Services	336	91.8%	$28,071	($1,935)	$27,894	($4,169)	254	88.8%
Public Administration	124	89.2%	$16,019	($1,007)	$16,736	($585)	102	90.3%
Real Estate and Rental and Leasing	59	84.3%	$16,336	($4,433)	$20,848	($1,812)	50	84.7%
Retail Trade	350	85.2%	$11,231	($3,409)	$11,740	($5,542)	232	81.7%
Transportation & Warehousing	90	88.2%	$12,411	($4,059)	$12,317	($4,191)	45	78.9%
Utilities	4	100.0%	$26,015	$1,418	$15,049	$7,240	3	75.0%
Wholesale Trade	137	88.4%	$25,383	($2,145)	$30,551	($4,546)	106	85.5%

Occupations

	Credential Achieved	Any Credential % of Trained	Occupational Skills Cert	OSC % of Trained Total	Occupational Skills Licensure	OSL % of Trained Total	Other	Other % of Trained Total
Architecture/Engineering (17)	4	1.7%	4	2.6%				
Business/Financial Operations Managers (13)	2	0.8%	1	0.6%			1	1.6%
Community/Social Services (21)	1	0.4%					1	1.6%
Computer/Mathematical Science (15)	56	23.5%	34	21.8%			22	34.9%
Construction/Extraction (47)	4	1.7%	3	1.9%			1	1.6%
Healthcare Practitioner/Technical (29)	10	4.2%	7	4.5%	1	20.0%	2	3.2%
Healthcare Support (31)	89	37.4%	59	37.8%	4	80.0%	23	36.5%
Life/Physical/Social Science (19)	17	7.1%	12	7.7%			4	6.3%
Management Occupations (11)	29	12.2%	23	14.7%			6	9.5%
Office/Administrative Support (43)	14	5.9%	5	3.2%			2	3.2%
Production (51)	4	1.7%	2	1.3%				
Transportation/Material Moving (53)	8	3.4%	6	3.8%			1	1.6%
Total Trained	238	100.0%	156	100.0%	5	100.0%	63	100.0%

Triangle Regional
Career Pathways Collaborative

ATTACHMENT 2

Employer Engagement

List of Attachments:

1. AMSTA Advanced Manufacturing Skills Trade Alliance Announcement, June 16, 2016

2. AMSTA Advanced Manufacturing Skills Trade Alliance Agenda, June 16, 2016

3. AMSTA Advanced Manufacturing Skills Trade Alliance, Panelist Questions, June 16, 2016

4. AMSTA Advanced Manufacturing Skills Trade Alliance, News Article, June 23, 2016

5. Regional Construction Roundtable Meeting Attendee List, February 17, 2016

6. Advanced Manufacturing /Skills Trade Industry Roundtable Meeting Agenda, November 17, 2015

7. Advanced Manufacturing /Skills Trade Industry Roundtable Employer Attendee List, November 17, 2015

8. Advanced Manufacturing/Skilled Trades Industry Roundtable Triangle Career Pathway Power Point Presentation, November 17, 2015

9. Advanced Manufacturing /Skills Trade Industry Roundtable Triangle Career Pathway, Meeting Notes, November 17, 2016

10. Regional Advanced Manufacturing/Skilled Trades Career Pathway Planning Meeting, December 15, 2015

11. Regional Advanced Manufacturing/Skilled Trades Career Pathway Planning Meeting Attendee List, December 15, 2015

12. Regional Advanced Manufacturing/Skilled Trades Career Power Point Presentation, December 15, 2015

Connecting Education & Industry
AMSTA
Advanced Manufacturing Skills Training Alliance

Education & Workforce Innovation Fund
101 Delacroix Street
Oxford, North Carolina 27565

Tel: (919) 316-0026
www.amstalliance.com

AMSTA Cruisers 2016

Connecting Education & Industry To Prepare Our Region's Future Workforce

You are invited!

Who: Education, government, and community leaders are invited to attend.

What:

- Panel discussion with industry leaders about educating students for advanced manufacturing careers in the Kerr Tar Region. Hosted by the Advanced Manufacturing Skills Training Alliance, a partnership created by the NC Education & Workforce Innovation Fund.
  - Dill Air Controls
  - Novozymes
  - Revlon
  - More panelists to come...
- Tour of the new Granville Central High School Career and Technical Education Building
- Lunch

When: June 16, 2016 at 9:00 am – 1:00 pm

Where: Granville Central High School: 2043 Sanders Rd Stem, NC 27581

Register at:

http://amstacruisers-industrypaneldiscussion.eventbrite.com

Attachment 2

AMSTA Cruisers 2016

Industry Panel Discussion

June 16, 2016

9:00 – 9:10

Introductions: Mr. Stan Winborne & Dr.

9:10 – 10:10

Panel Discussion:

Moderator: Mr. Eddie Ferguson,
Vance-Granville Community College

Speakers: Altec Industries, Mr. Jeff Tingen
Dill Air Controls, Mr. Steve Tsotsoros
Golden Leaf Foundation, Mr. Mark Sorrells
Kerr Tar Career Pathways, Mr. Roger Shackleford
Novozymes, Mr. Arlan Peters
Vance-Granville Community College, Ms. Sara Lloyd

10:10 – 10:25 Break

10:25 – 11:25 Updates by State and Local Officials

Catherine Truitt, Senior Education Advisor, Office of the Governor

Betty Jo Shepheard, Eastern Regional Field Representative for Senator Burr

Austen Shearer, Regional Representative for Senator Thom Tillis

Bob Witchger, Director Career & Technical Education North Carolina Community College System

Jo Anne Honeycutt, Director of Career & Technical Education NC Department of Public Instruction

11:25 – 12:00 Tours of Career and Technical Education Building

12:00 – 1:00 Lunch

1:00 – 1:30 Teachers board busses and travel to Novozymes in Franklin County

Connecting Education & Industry
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Oxford, North Carolina 27565

Tel: (919) 316-0026
www.amstalliance.com

AMSTA Cruisers Panelist Questions – June 16, 2016

1. Tell us about your company?
    a. What you do?
    b. Locations (local and worldwide)?
    c. Number of employees?
2. What types of jobs are available with your company?
3. What types of skills and/or education is needed for these positions?
    a. Specific credentials (like CPT, Work Keys, etc)?
    b. Salary ranges for your most needed positions?
    c. Can you share job descriptions with high school CTE and community college educational professionals to help with curriculum design?
4. How do you currently train your workforce?
5. Do you have an active internship or apprenticeship program?
    a. Why or why not?
6. Do you have relationships with local school districts and community college?
    a. Why or why not?
7. For the companies with relationships: What is good/beneficial and what needs improvement?
8. Have you seen an increase in outreach from education to your company in the past two years?
    a. If yes, in what way?
    b. Do you have input or recommendations about how you would like to connect with educators in your region? (i.e., what would make it easier, more productive, etc.)

We will offer the teachers in the audience time to ask a few follow-up questions based on the questions/answers above.

Schools and VGCC partner to discuss advanced manufacturing jobs

June 23, 2016 Leave a Comment

Panelists for the discussion on June 16 at Granville Central High School included, from left, Jeff Tingen, human resources manager for Altec Industries in Creedmoor; Steve Tsotsoros, operations manager for Dill Air Controls Products in Oxford; Roger Shackleford, Career Pathways consultant for the Kerr-Tar Workforce Development Board; Mark Sorrells, senior vice president of the Golden LEAF Foundation; Arlan Peters, head of sustainability at Novozymes in Franklinton; and Sara Lloyd, director of customized training for VGCC. (VGCC photo)

Educators, local industry representatives and community leaders shared ideas at a panel discussion organized on June 16 by the Advanced Manufacturing Skills Training Alliance (AMSTA), a partnership of Vance-Granville Community College, Granville County Schools, Franklin County Schools, Warren County Schools and Vance County Schools.

The event was part of "AMSTA Cruisers 2016," a multi-day program that brought teachers from the four counties together to learn more about manufacturing and the regional economy.

Held at Granville Central High School in Stem, the discussion featured panelists Jeff Tingen, human resources manager for Altec Industries in Creedmoor; Steve Tsotsoros, operations manager for Dill Air Controls Products in Oxford; Arlan Peters, head of sustainability at Novozymes in Franklinton; Mark Sorrells, senior vice president of the Golden LEAF Foundation; Roger Shackleford, Career Pathways consultant for the Kerr-Tar Workforce Development Board; and Sara Lloyd, director of customized training for VGCC. Eddie Ferguson, the VGCC Endowment Fund director, served as the moderator.

Ferguson asked what he called the "all-star panel" to educate the audience about industry needs and workforce development. Tingen started by declaring that "manufacturing is alive and well.... We currently have 60 job openings and are struggling to fill them." He explained that many of his company's jobs require higher technical skills than they did in the past. For example, robotic welders need to be operated by people who know not only how to weld but also how to program the machine. Similarly, Tsotsoros said it is important to promote mechatronics training, which encompasses a variety of skills, at the high school and college levels. VGCC offers a two-year Mechatronics Engineering Technology degree to attempt to meet industry demands.

Lloyd, who works closely with more than 40 manufacturers to develop training solutions, said that employers no longer want workers with a single skill set. "They want someone who can troubleshoot,

someone with a broad range of skills and technical training," she said. "The great news is that once you're trained and hired by a manufacturer, the opportunities are endless."

Shackleford said that the state's Career Pathways initiative is all about "helping us understand employers' needs and align our educational programs, so that we are all speaking the same language."

Likewise, Sorrells emphasized the need for collaboration. "Employers say they can't find the talent to fill their positions, so we need a unified talent development plan in our communities, starting at the middle school level," he said. "If we don't solve our labor crisis, we won't be competitive, particularly in our rural areas." To that end, the Golden LEAF Foundation established the "Essential Skills in Advanced Manufacturing" Initiative. The foundation awarded a grant from that initiative to AMSTA.

Sorrells encouraged industries to visit schools and talk to students about what they do, just as they should welcome school groups to their facilities. Peters noted that Novozymes has developed an innovative partnership with Franklin County Early College High School.

The panelists agreed that not only technical skills, but also so-called "soft skills," are important for developing a strong workforce. "We want people who are responsible, accountable, engaged and curious — people who ask 'why,'" Tsotsoros said. He added that his company joined the North Carolina Triangle Apprenticeship Program, in partnership with VGCC, and that program promotes such soft skills in high school-age apprentices as well.

Following the panel discussion, attendees received updates from state and federal officials. Speakers included Catherine Truitt, senior education advisor to Gov. Pat McCrory; Betty Jo Shepheard, a regional field representative for U.S. Sen. Richard Burr; Austen Shearer, a regional field representative for U.S. Sen. Thom Tillis; Bob Witchger, director of Career & Technical Education for the N.C. Community College System; and Jo Anne Honeycutt, director of Career & Technical Education for the N.C. Department of Public Instruction.

Truitt noted that the state's goal is that by 2025, 67% of North Carolina workers will have education beyond high school. She said that the North Carolina Education and Workforce Innovation Fund (EWIF) helps to achieve that goal. Funding from the EWIF supported AMSTA Cruisers 2016, as did a $10,000 grant from the State Board of Community Colleges, as part of a statewide "Taste of Industry" initiative.

From the community college system's perspective, Witchger said his key strategies are engaging employers, promoting Work-Based Learning opportunities and getting high school students into college courses through the Career & College Promise program.

Attendees concluded the event by touring Granville Central High School's new, 35,000-square-foot Career & Technical Education wing. Some of the state-of-the-art equipment in the facility was made possible by a grant from the Golden LEAF Foundation.

MEETING SIGN-IN SHEET

Project: Regional Construction Roundtable Meeting **Meeting Date:** February 17/9:00-11:00

Facilitator: **Place/Room:**

Name	Company	E-Mail
Cassie Sears	Sears Contracting, Inc	csears@searscontract
Steve Berry	Ral. Fire Dept	Steve.Berry@Raleigh.gov
Esther Coleman	DCW DB	esther.coleman@durhamnc.gov
Charlene West	Durham Tech	westc@durhamtech.edu
Pat Harris	Orange County Sch.	patricia.harris@orange.k12.nc.us
Holly Fraccaro	Home Builders Association	holly@hbadoc.com
Holly Southerland	Bryant Durham	holly.southerland@bryantdurham.com
Todd Ireland	Kimley-Horn	Todd.Ireland@KimleY-Ho
Heather Downey	McDonald Tool	hdowney@mcdonaldtool.com
Jay Owens	Rapid Repair Experts	jowens@rapidrepairexperts
Jerry Board	Rapid Repair Experts	jboard@rapidrepairexperts.com
Terri Allen	Wake Tech	taallen2@wakete
Stephen Barrington	CAWDS	stephen.barrington@wakegov.com
Ronni Pizzotti	NC Works	rferowitz@edsi
Lonnda Brothers	NC Works	solat ondalan@msn.com
Maria A. Johnson	Durham Public Schools	maria.johnson@dpsnc.
Kelli McClean	NC works Durham	kmclean@edsisolutions.com
Randy Egseglan	Durham Tech.	egsegianr@durhamtech
Charles McCall	NC Works Durham	lmccall@edsisolution

MEETING SIGN-IN SHEET

Project: Regional Construction Roundtable Meeting **Meeting Date:** February 17/9:00-11:00

Facilitator: **Place/Room:**

Name	Company	E-Mail
Brendan Hale	Baker Roofing	brendanhale @bakerroofi
Janice Lane	Stone Mtl Corp	janice.lane@
Richard Jones	Bryant Durham Electric	Stonemtlcorp@s. Richard. Jones @ Bryant Durham
Lynn Kerwger	WTCC	lk kerwger@wakete
Phil Bisesi	Electri Cities of NC	pbisesi@electricities.org
DACE FEY	VGCC	feyd@VGCC.edu
Rachel Hamm	HBA	~~cachel~~ rhamm@hbawak c
Michael Haley	GRCC/WCED	
Vic McCormick	JCC	Kvmccormick@johnstone.edu
George Hining	MHAworks	GHining@mhaworks.c
Phil Vice	Wake County Schools	pvice@wcpss.net
Gene Bradham	Durham City-County Inspections	gene.bradham@durhamnc
Malinda Todd	OEWD	malinda.todd@durham.go
Lloyd E. Dunn, JR	Wake Tech Comm Coll	LEDUNN1@WAKETECH.EDU
Ben Foti	Kerr-Tar WDB	bfoti@kerrtarcog.org
Anthony Rogers	EDSI	arogers@edsisolutions.

Attachment 6

Agenda

Advanced Manufacturing/Skilled Trades Industry Round Table
November 17, 2015
9:00 – 11:00 AM
Butner Town Hall

Welcome	
Overview of Goals and Objectives	Eric Breit
Identify In-Demand Occupations	Employers
Developing the Pathway • Curriculum and Credentials • Career Awareness • Work Based Learning • Multiple Points of Entry	Pathway Partners/Employers
Regional Career Pathway Next Steps	Pathway Partners

Advanced Manufacturing/Skilled Trades Industry Roundtable

Triangle Career Pathway Planning Meeting, November 17, 2015

Attendees from Industry

- Vanessia Alvarad, Dill Air Controls – vanessiaa@dillvalves.com
- Gary Dingess, Parata Systems – gdingess@parata.com
- Jennifer Flieler, bioMerieux – Jennifer.flieler@biomerieux.com
- Kevin Johnson, Avintiv – kevin.johnson@avintiv.com
- Tracy Parks, Parata Systems – tparks@parata.com
- Heather Rehder, bioMerieux - heather.rehder@biomerieux.com
- Key Winkler, Waste Industries – key.winkler@wasteindustries.com
- Joe Zuech, Bell and Howell – joe.zuech@bhemail.com

Attendees from Public Schools, Community Colleges, Workforce Boards, and Community Organizations

- Rosa Andrews, Director of Economic Development, Johnston Community College – rsandrews@johnstoncc.edu
- Stephanie Ayers, Project Manager, Advanced Manufacturing Skills Training Alliance, Vance-Granville Community College – ayerss@vgcc.edu
- Alfreda Barnett, Strategic Initiatives Manager, Capital Area Workforce Development Board – alfreda.barnett@wakegov.com
- Stephen Barrington, Business Engagement Director, Capital Area Workforce Development Board – stephen.barrington@wakegov.com
- Ken Berger, Piedmont Community College – ken.berger@piedmontcc.edu
- Jean Blaine, Director of Occupational Extension, Vance-Granville Community College – blainej@vgcc.edu
- Eric Breit, Strategic Initiatives Director, Capital Area Workforce Development Board – eric.breit@wakegov.com
- Joy Callahan, Dean of Economic and Workforce Development, Johnston Community College – jtcallahan@johnstoncc.edu
- Willa Clark, CTE Director, Vance County Schools – wclark@vcs.k12.nc.us
- Patrick Coin, Assistant Dean, Applied Technologies Programs – coinpg@durhamtech.edu
- Joy Curry, Director, Career Pathways Program, Wake Tech Community College– jdcurry@waketech.edu
- Jeff Curtis, Business Engagement Director, Capital Area Workforce Development Board – jeff.curtis@wakegov.com
- Stephanie Deese – Stephanie.deese@wakegov.com
- Blondelle Edgerton, Director WIA, Vance-Granville Community College – edgertonb@vgcc.edu
- Ronnie Ferotti, NCWorks Career Center – rferotti@edsisolutions.com

- Ben Foti, Youth Program Coordinator, Kerr-Tar Workforce Development Board – bfoti@kerrtarcog.org
- Joy Frankoff, School-to-Career Coordinator, Wake County Public Schools – lfrankoff@wcpss.net
- Alexis Franks, NCWorks Business Representative – afranks@edsisolutions.com
- Vincent Gilreath, Director, Kerr-Tar Workforce Development Board – vgilreath@kerrtarcog.org
- Lou Grillo, Business Services Representative and Loan Officer, Kerr-Tar Workforce Development Board – lgrillo@kerrtarcog.org
- Debra Harlow, Dean of Adult Basic Skills, Piedmont Community College – debra.harlow@piedmontcc.edu
- Maria Johnson, CTE Instructional Manager, Durham Public Schools – maria.johnson@dpsnc.net
- Laureen Jones, Director Career and Technical Education, Franklin County Public Schools, Laureengjones@fcschools.net
- Lynn Kavcsak, Dean, Career and Employment Resources, Wake Tech Community College– lekavcsak@waketech.edu
- Michelle LaPorte, Career Pathway Coordinator, Durham Tech – laportem@durhamtech.edu
- Sara Lloyd, Director of Customized Tranining, Vance-Granville Community College – lloyds@vgcc.edu
- Al McMahill, Consultant, Durham Public Schools – amcmahill@mindspring.com
- Kelly Maness, Business Engagement Manager, Capital Area Workforce Development Board – kelly.maness@wakegov.com
- Brian Mathis, Principal, Granville Central High School - mathisb@gcs.k12.nc.us
- Susan Oney, Strategic Operations Manager, EDSI – soney@edsisolutions.com
- Deborah Porto, Dean of Business and Advanced Technologies, Johnston Community College – drporto@johnstoncc.edu
- Monica Satterwhite, Manager, NCWorks – monica.satterwhite@nccommerce.com
- Roger Shackleford, Kerr-Tarr Workforce Development Board
- Malinda Todd, Senior Employment Program Coordinator, Durham Office of Economic and Workforce Development – malinda.todd@durhamnc.gov
- Phil Vice, Senior Administrator for Technology and Trade/Industrial CTE Programs, Wake County Public Schools – pvice@wcpss.net
- Russell Wahrman, Administrative Department Head, Applied Engineering and Technologies – rawahrman@waketech.edu
- Laura Wendell, Employer Relations Coordinator, Made in Durham – LWendell@MadeInDurham.org
- Charlene West, Dean, Career and Technical Programs, Durham Tech – westc@durhamtech.edu
- Brenda Wilkerson, Communications Manager, Capital Area Workforce Development Board – Brenda.wilkerson@wakegov.com
- Ken Wilson, TAACCCT Coordinator, Vance-Granville Community College – wilsonk@vgcc.edu

- Stan Winborne, Director of High Schools/CTE, Granville County Public Schools – winbornes@gcs.k12.nc.us
- Peter Wooldridge, Vice President for Corporate and Continuing Education, Durham Technical Community College – wooldridgep@durhamtech.edu
- Brian Worley, Director of Advanced Technologies, Johnston Community College – beworley@johnstoncc.edu

Attachment 8

ADVANCED MANUFACTURING/ SKILLED TRADES INDUSTRY ROUND TABLE

Career Pathway Implementation
Regional Partnership Team

Career Pathways Overview

...A clear sequence of coursework, credentials, and supportive services to prepare those looking for work for a natural progression of high-demand jobs, to address the employment demands of our region's industries.

...The career pathway approach reorients existing educational and workforce services from myriad disconnected programs toward one system focused on individuals' postsecondary and economic success.

From: Career Pathways Toolkit: A Guide for System Development

U.S. Department of Labor

Goals for Today's Meeting

- To learn from area employers about their advanced manufacturing/skilled trades in-demand employment needs

- To begin to align career pathway with labor demand
  - Curriculum, credentials, career awareness, work-based learning, multiple points of entry and exit

- To discuss the next steps for our regional process for career pathway development

Businesses Represented

- Avintiv
- Bell and Howell
- Dill Air Controls Products
- Parata
- bioMerieux
- Waste Industries

Regional Partnership Members

Local Area Boards

Capital Area Workforce Development Board
Durham Workforce Development Board
Kerr-Tar Workforce Development Board

Community Colleges

Durham Technical Community College
Johnston Community College
Piedmont Community College
Vance-Granville Community College
Wake Technical Community College

Community Agency Partners

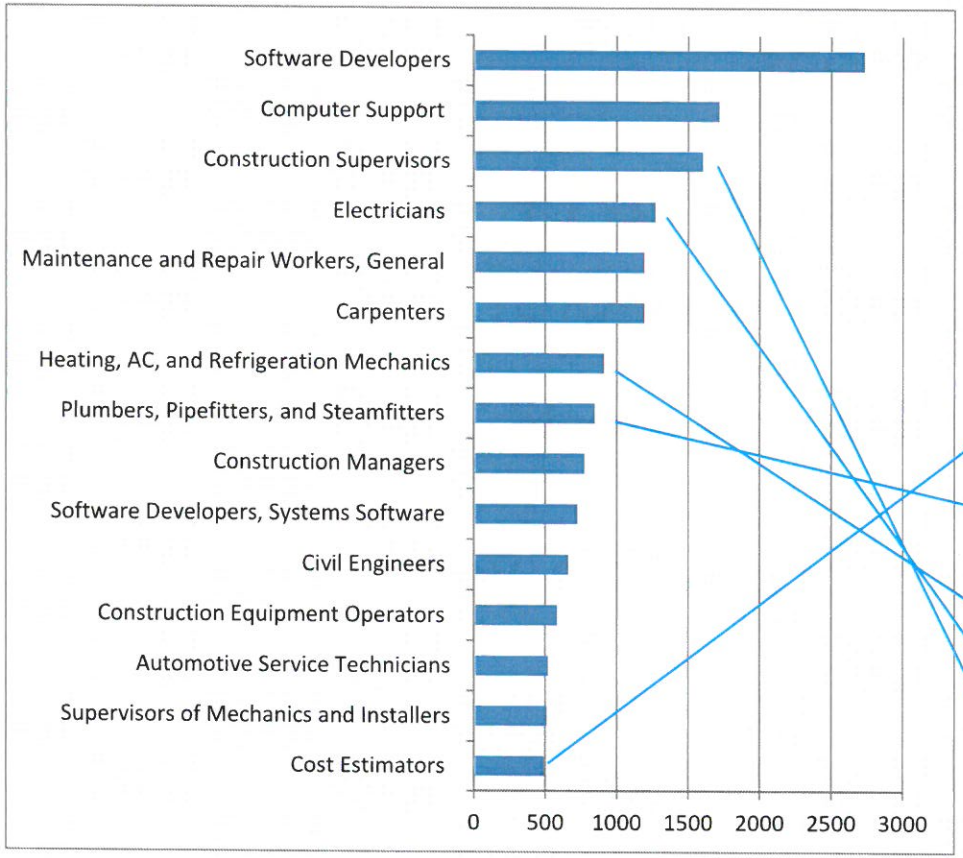
Made In Durham

Public Schools

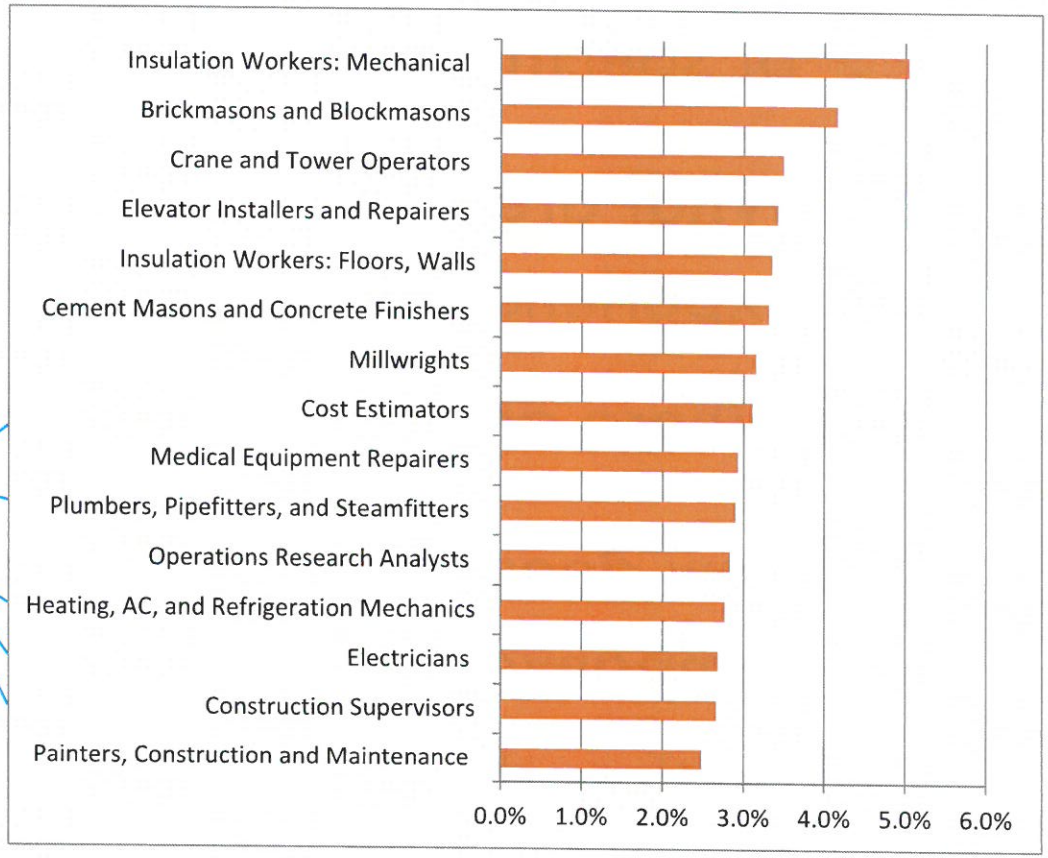
Caswell County Schools
Chapel Hill Carrboro City Schools
Durham County Public Schools
Franklin County Schools
Granville County Schools
Johnston County Schools
Orange County Schools
Person County Public Schools
Vance County Schools
Wake County Public Schools
Warren County Public Schools

NC Commerce 5 and 4 Star Jobs in manufacturing and construction in our North Central Prosperity Zone region

Top 15 by 10-year net employment change



Top 15 by projected annualized growth rate

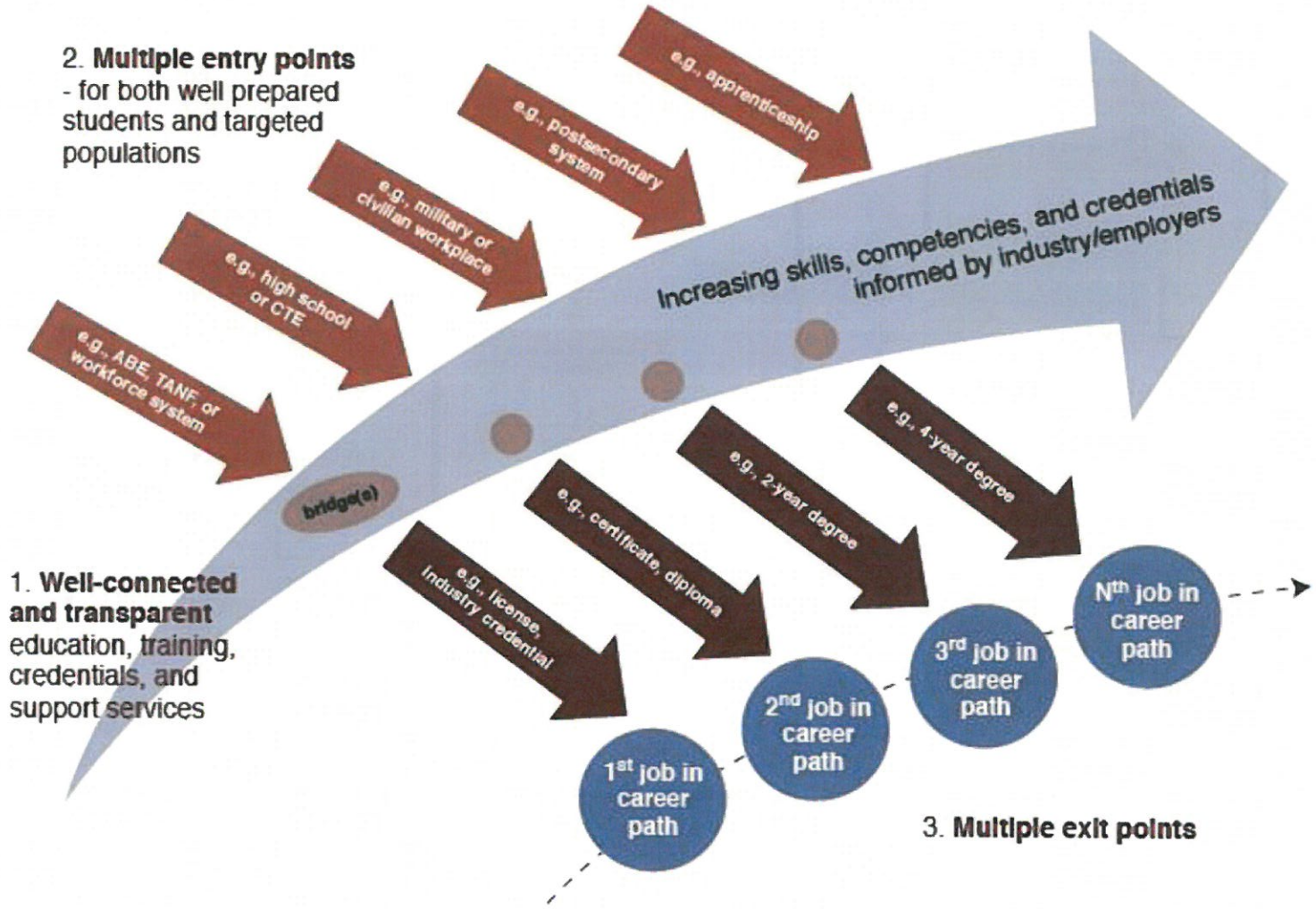


Source: nccareers.org/starjobs/star_jobs.html

Questions

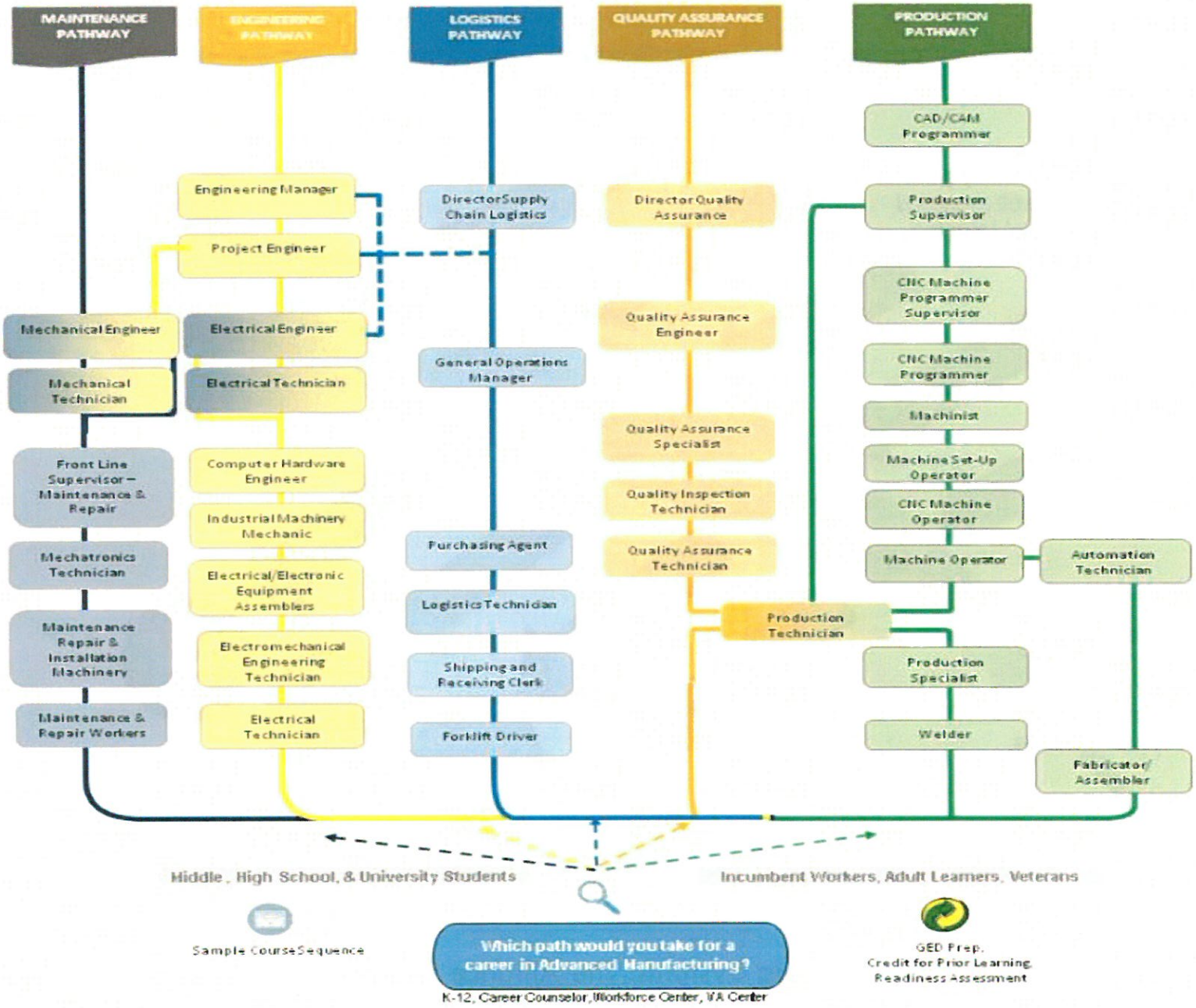
- ❑ Write down your three most critical needs, in terms of specific positions/occupations.
- ❑ What are their requirements, in terms of experience, education, and certifications?
- ❑ Where are your needs shifting the most?
- ❑ How does an employee advance within your company?
- ❑ Do they share common skill requirements and/or fall within similar occupational categories?

Career Pathways Model

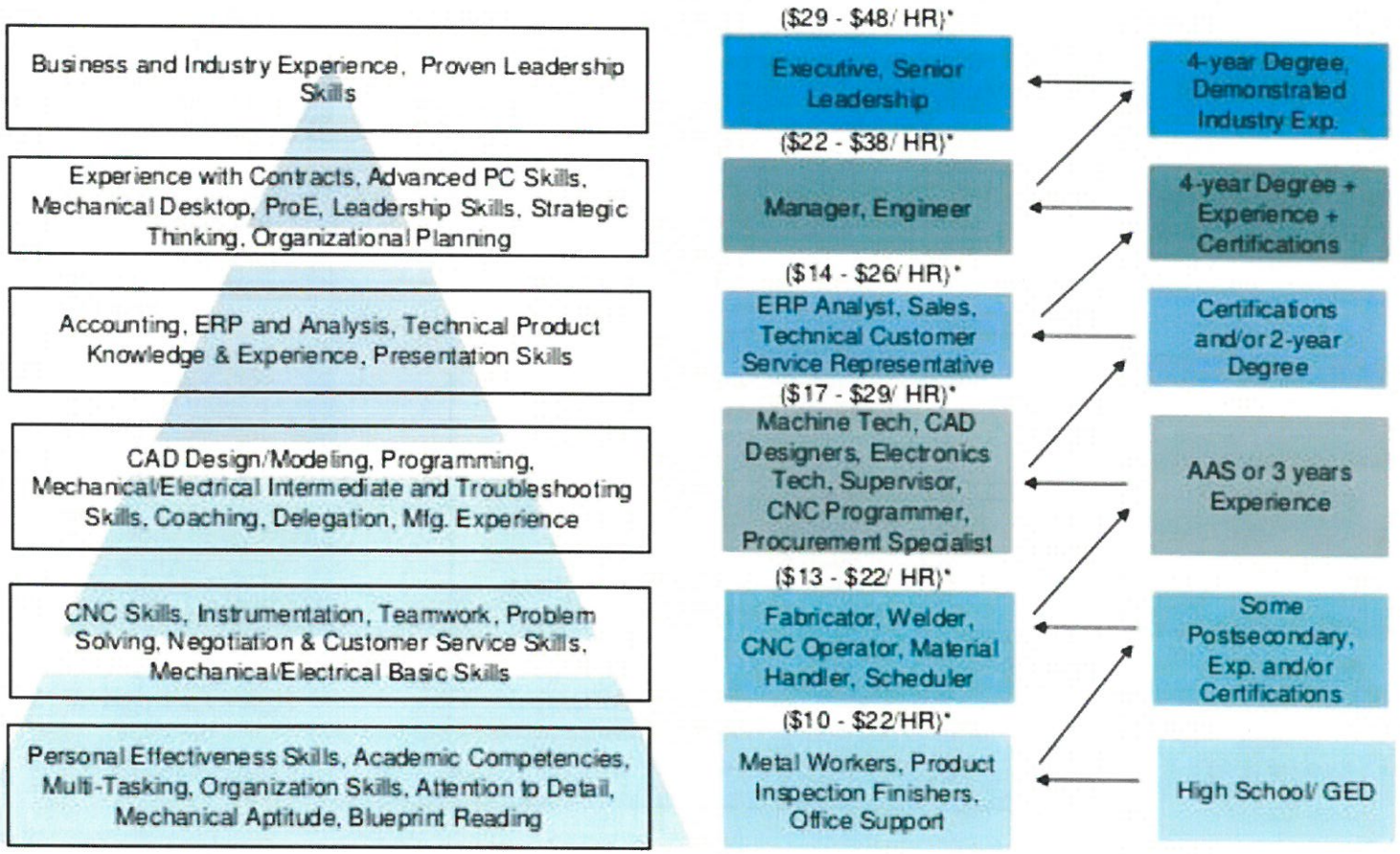


From: Shared Vision, Strong Systems: The Alliance for Quality Career Pathways Framework

Possible manufacturing pathways



Example of advanced manufacturing career pathway



*Base wage rate not including benefits.

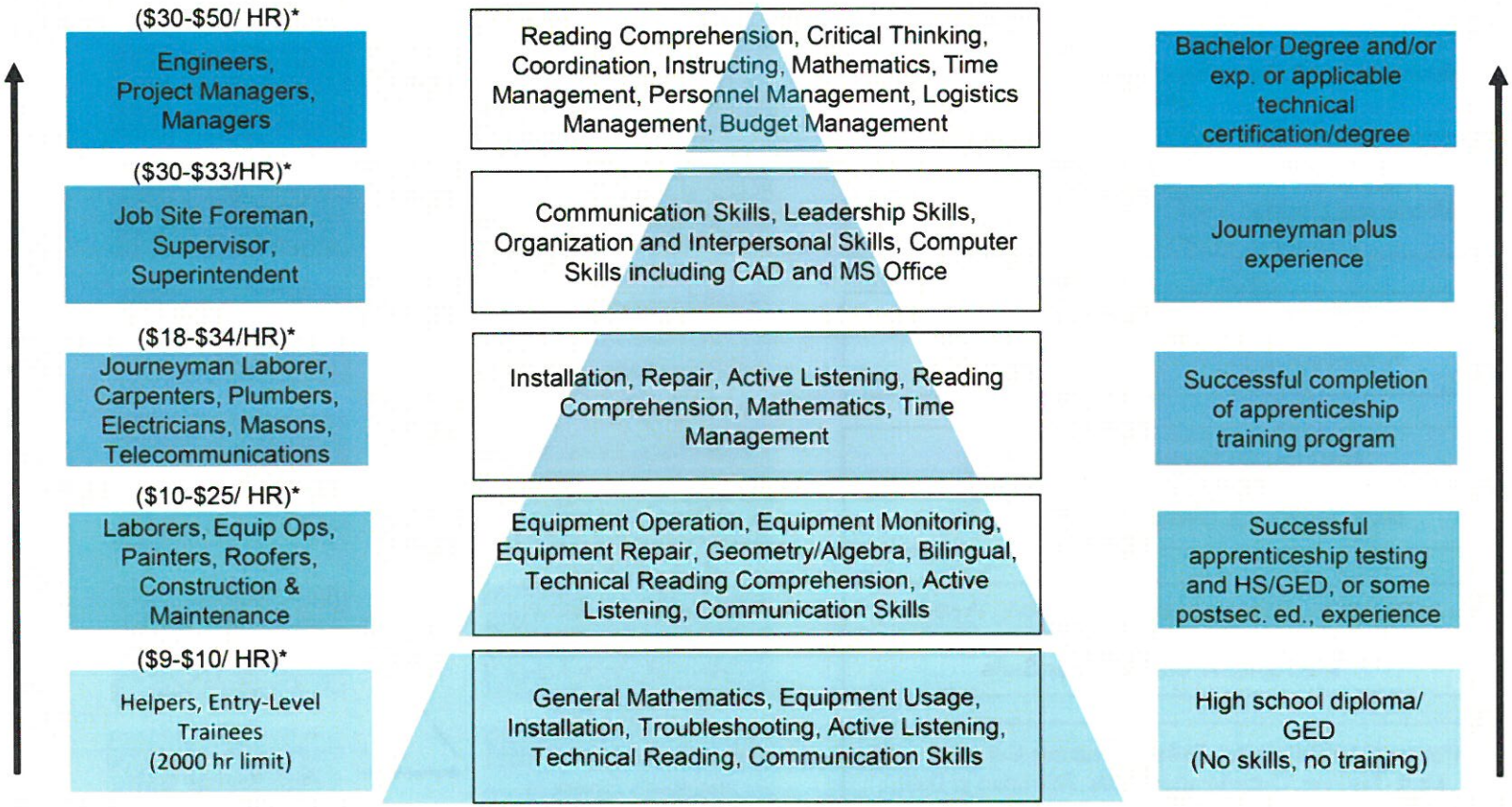
Experience, skills, and competencies

Occupations and pay

Education

Source: Central Iowa Works

Example of commercial construction career pathway



Occupations and pay

Experience, skills, and competencies

Education

Source: Central Iowa Works

Aligning Pathway with Demand

- Curriculum and credentials
- Career awareness
- Work-based learning
- Multiple points of entry and exit

NCWorks career pathway criteria for certification (with examples of supporting documentation suggested for application)

- Career awareness
  - Career awareness strategy/plan
  - Strategic plan for training
  - Professional development activities for advisors
- Articulation and coordination
  - Academic coordination agreements
- Work-based learning
  - WBL strategy/plan
  - Number of committed opportunities
  - Industries represented
- Multiple entry/exit points
  - Pathway map
  - Occupations along pathway
  - Credentials needed for each entry/exit point
- Evaluation
  - Evaluation criteria and plan
  - Enrollment and completion goals/progress toward goals

Possible regional career pathway next steps

- Information technology
  - Asset map of activities each community has undertaken and plans to undertake related to the certification criteria
- Advanced manufacturing/skilled trades
  - Meeting of regional partners to narrow in on possible occupations and to begin asset map
- Health/life sciences
  - Meeting of regional partners to narrow in on possible occupations and to agree upon next steps

Suggestion: a full day meeting the week of Dec 14 to work on all three pathways

- *Only core team members would need to be there for the full day.*
- *Content experts would only attend meetings related to their area of specialization.*
- *Meetings for each pathway will vary in content, depending on their stage of development.*
- *Lunch will be provided!*

Types of occupations within manufacturing and skilled trades

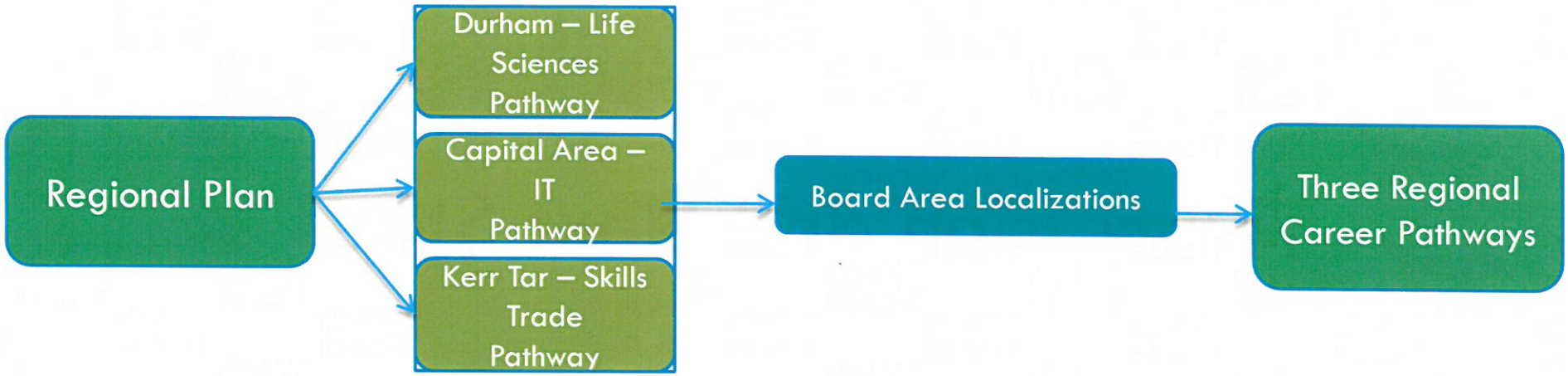
Occupations listed as part of the manufacturing career cluster, from O*NET		SOC	
120	61%	51	Production occupations
31	16%	49	Installation, maintenance, and repair occupations
15	8%	17	Architecture an engineering occupations
8	4%	47	Construction and extraction occupations
8	4%	19	Life, physical, and social science occupations
3	2%	53	Transportation and material moving occupations
2	1%	15	Computer and mathematical occupations
2	1%	43	Office and administrative support occupations
1	1%	11	Management occupations
1	1%	13	Business and financial operations occupations
2	1%	27	Arts, design, entertainment, sports, and media occupations
1	1%	29	Healthcare practitioners and technical occupations
2	1%	25	Education, training, and library occupations
196			

An example of a breakdown of "skilled trades" by their SOC, from Michigan

Skilled industrial trades			Skilled construction trades			Skilled service trades		
SOC	# of jobs listed		SOC	# of jobs listed		SOC	# of jobs listed	
47	3	14%	47	17	85%	29	3	13%
49	7	32%	49	2	10%	31	4	17%
51	12	55%	53	1	5%	35	1	4%
	22			20		39	3	13%
						43	2	9%
						49	4	17%
						51	5	22%
						53	1	4%
							23	

Regional Career Pathways - North Central Region

Durham, Kerr-Tar and Capital Area



Discussion and Next Steps

Advanced Manufacturing/Skilled Trades Industry Roundtable

Triangle Career Pathway Planning Meeting, November 17, 2015

Notes from meeting

In-demand jobs cited by employers

Parata Systems

MIS/Software developers

- Advanced
- $70,000 to $90,000
- Salesforce administrator/Sharepoint administrator
- Involves new project development, but it is a challenge because software developers do not know how to do project management. We have a lot of turnover with this position.

Customer service for network needs

- Mid level
- $40,000 to $50,000
- Network certifications required
- Customer service skills required
- High school degree

Technical technicians

- Mid level
- $50,000 to $60,000
- AS degree
- ASEE, ASQ
- Customer service skills required (field service)
- Finding someone with both technical skills and customer service skills is a challenge.

Bell and Howell

Final systems technician (mechatronics)

- Advanced
- High $60,000 to low $70,000
- Requires knowledge of software, motors, mechanics, electronics
- Need to debug, personalize it for end consumer.

Mechatronics assembly

- Mid level
- $30,000 to $50,000
- Requires knowledge of software, PLC, motors, electronics
- High school degree

Electrical technicians

- Advanced (knowledge base)
- $50,000s
- Associates degrees and/or long-serving technicians
- Board-level repair and diagnostics
- These are skills that have disappeared.

bioMerieux

Process engineer

- Advanced
- $90,000s
- BS in engineering
- Specific skillset: tech transfer from R&D to production

Facilities maintenance technicians

- Mid level
- $50,000s
- High school diploma
- Certifications and licenses preferred, but not required
- HVAC, boilers, chillers, plumbing
- 24/7 operation, so requires two weekends per month

Manufacturing technicians

- Entry level
- $17 per hour
- High school diploma
- No certifications or licenses required
- "They are manufacturing a diagnostic test. A small error can be very costly. Getting them to understand the importance of writing down the right date or weight is crucial. They are not just working on a widget."

Avintiv

Maintenance electronic technicians

- Advanced (because of certification required)
- No specific degree is required.
- Siemens PLC required.

Quality assurance lab technicians

- Mid level
- No degree required.
- Silver CRC is required.

Maintenance general mechanics

- Advanced level (knowledge base)

- No degree required.
- Knowledge based

Machine operator

- Entry level
- Bronze CRC is required.

Waste Industries

Heavy equipment technicians/diesel mechanics

- Mid level
- $21 to $25 per hour
- 55 hours per week, time-and-a-half after 40 hours
- Need some computer experience, for diagnosing.

Drivers

- Mid level
- $16 to $18 per hour
- 55 hours per week, time-an-a-half after 40 hours
- CDL, Class A or B license
- There is a major shortage of drivers.

Preventative maintenance mechanics

- Entry level
- $13 to $14 per hour
- If they can turn a wrench, we'll bring them in.

Heavy equipment operators

- Entry level
- $16 to $21

Operations and maintenance supervisors

- Mid level
- $65,000 to $75,000

Dill Air Controls

Machine operator

- Entry level
- High school diploma
- $13 to $17 per hour
- Requires passing an in-house mechanical aptitude test.
- OJTs

Design engineers

- Advanced level
- BS in engineering

- $70,000 to $90,000
- Very hard for us to fill, partially because of our location.

Other occupations and skills mentioned, that are difficult to find

- High speed vision analytics
- Seasoned procurement professional with deep technical skills
    - Strategic sourcing
    - Qualification of suppliers

Themes from the meeting, along with quotes/paraphrases from employers and other notes

Training

- We have our own university. Our employees have transcripts. When we move a product into a new area, we know which technicians will need to be trained. Our trainings allow us to promote employees from within. (Bell and Howell)
- We (Parata) have a reimbursement program for employees to go out and get their Cisco certifications and Window certs. We also have an internal training organization that trains employees on our products.
- Siemens training is offered off site and is very expensive. It is a series of trainings—three separate week-long courses that each technician has to attend. Employees are currently hired prior to going to the Siemens training. Ideally, employees would be hired having already obtained the training. (Avintiv)
- Certified Production Technician certification would be of value for our machine operators. (Avintiv)
- Community colleges want to ramp up the offering of the Certified Production Technician certification. Community colleges hear from employers that, yes, it sounds great; but the challenge is then to create the demand from employers to fill the classes. Also, in some areas, there are more people that go through the program than can find jobs. (comments from community college representatives)
- Some of the businesses had not heard of the Certified Production Technician.
- One challenge is that, for new processes and new production lines, employers need trained staff yesterday. It is sometimes hard to anticipate, with having to respond to revenue and having to flex up and down quickly to accommodate new contracts.
- With competition really hitting us hard, we (Waste Industries) created career partnerships with some colleges (Wake Tech and Johnston Community College are two examples), to grow our own. We can bring students on as full-time employees. We also donate equipment to the schools, like trucks, for driving and mechanic training. We are also trying to get down into the high schools. The primary attraction is the pay. We also have our own in-house training, Waste Industries University, to support promotion from within.
- It would be nice to have a certification course for basic manufacturing skills for entry level operators that covers simple measuring devices, for example. (Avintiv)

- A lot of our training is on the job, because we run older machines (Davenports, Brown Sharp). To get someone up and running, so they can run the machine themselves, is an 18 month process. (Dill)
- Regarding NCWorks on-the-job training opportunity, only Dill has used it. The others had not heard of it, suggesting that it could be marketed better.
- Lean Six Sigma is important. You can always teach the mechanical aptitude. The out-of-box thinking is the struggle.
- We all have training programs, because we cannot find it from the outside.

Silver tsunami

- In ten years, we will lose a lot of knowledge from our workforce.
- One way we address this and to counter manufacturing stereotypes is that we participate in manufacturing days.
- Half of our workforce is in their 40s and 50s. (Avintiv)
- 71 percent of our employees are over the age of 50. (Dill)

Types of workforce

- We (Parata) tend to trend more towards the older workers for entry-level jobs. They want to work. We don't have to sit there on the floor and have them under the gun.
- Veterans are a great workforce. They don't understand theory. But they have more of a system level view. People coming out of community college understand the theory better.
- No challenges hiring vets.
- I get a lot of my management staff from the military. Military brings in leadership.
- Most of our military are in maintenance positions. They are accustomed to being away.

Other

- Personal financing and budgeting are the biggest challenges for many of our workers.
- The hardest thing for our entry level employees is for them to get out of bed and come to work.
- Overall business acumen is a challenge. A lot of the technical skills related to business are lacking.
- You work in a system; you don't sit on an assembly line. Knowing the overall system is key.
- Electronics people seem to be the most well rounded and are the best system people. They bridge the gap (between software and mechanical) the strongest.
- Solder skills are hard to find.
- There was discussion about the potential for internships opportunities, for high school students and college students. Some businesses offer internship opportunities, but from the conversation, it appears that communication between businesses and educational institutions needs to be strengthened to increase opportunities.
- There was a discussion about soft skills. Among those cited as important were:
    - Willingness to work ("...which is a big challenge for many entry level folks.")
    - Being self-directed ("We don't have the time to spend with staff. They need to show self direction.)

- Project management and time management

Career pathways

- The question was asked whether, to move up in their companies, they look more at performance and aptitude or credentials.
  - "It is some of both."
  - "Capability comes first. The credentials and degrees are the filter mechanisms."
- There are people that cross pathways. People will cross from the production pathway to the research and development pathway. If you show that you are worth on the floor, you tend to go from production to become an R&D process engineer, or maybe they could go into operations and become a buyer.
- Some of the shifts between and within pathways are related to evolving interests as workers get older.
- Parata has its own formalized career ladders, and employees move between them. An example is customer service staff going over to become Salesforce staff.
- Bell and Howell cited a number of employees that go from production to service/maintenance. Service/maintenance pays more than production.

A general takeaway from the conversation was that better communication is needed between businesses and education and workforce training providers.

- Alexis Franks, NCWorks Business Representative – afranks@edsisolutions.com
- Lou Grillo, Business Services Representative and Loan Officer, Kerr-Tar Workforce Development Board – lgrillo@kerrtarcog.org
- Debra Harlow, Dean of Adult Basic Skills, Piedmont Community College – debra.harlow@piedmontcc.edu
- Tim Harrell, Director Career and Technical Education, Johnston County Schools – timharrell@johnston.k12.nc.us
- Laureen Jones, Director Career and Technical Education, Franklin County Public Schools, Laureengjones@fcschools.net
- Lynn Kavcsak, Dean, Career and Employment Resources, Wake Tech Community College– lekavcsak@waketech.edu
- Victoria Knott, North Carolina National Guard Employment and Education Center – victoria.knott.ctr@mail.mil
- Sara Lloyd, Director of Customized Tranining, Vance-Granville Community College – lloyds@vgcc.edu
- Tim Lucas, Wake Tech Community College – tlucas1@waketech.edu
- Al McMahill, Consultant, Durham Public Schools – amcmahill@mindspring.com
- Brian Mathis, Principal, Granville Central High School - mathisb@gcs.k12.nc.us
- Lydia Newman, Made in Durham – lnewman@madeindurham.org
- Susan Oney, Strategic Operations Manager, EDSI – soney@edsisolutions.com
- Grant Partin, EDSI, Raleigh – gpartin@edsisolutions.com
- Deborah Porto, Dean of Business and Advanced Technologies, Johnston Community College – drporto@johnstoncc.edu
- Debra Seamster, Piedmont Community College – debra.seamster@piedmontcc.edu
- Roger Shackleford, Kerr-Tarr Workforce Development Board – rogershackl@yahoo.com
- Malinda Todd, Senior Employment Program Coordinator, Durham Office of Economic and Workforce Development – malinda.todd@durhamnc.gov
- Phil Vice, Senior Administrator for Technology and Trade/Industrial CTE Programs, Wake County Public Schools – pvice@wcpss.net
- Russell Wahrman, Administrative Department Head, Applied Engineering and Technologies – rawahrman@waketech.edu
- Laura Wendell, Employer Relations Coordinator, Made in Durham – LWendell@MadeInDurham.org
- Charlene West, Dean, Career and Technical Programs, Durham Tech – westc@durhamtech.edu
- Peter Wooldridge, Vice President for Corporate and Continuing Education, Durham Technical Community College – wooldridgep@durhamtech.edu
- Brian Worley, Director of Advanced Technologies, Johnston Community College – beworley@johnstoncc.edu

Regional advanced manufacturing/skilled trades career pathway planning meeting

December 15, 2015

Agenda

1. Advanced manufacturing/skilled trades industry roundtable debrief
    a. What we learned
    b. Review of in-demand advanced manufacturing/skilled trades occupations

2. Advanced manufacturing/skilled trades career pathway next steps
    a. Selection of advanced manufacturing/skilled trades occupational track for first certified career pathway
    b. Recognize, align, and leverage existing work being done in our communities for our regional IT pathway
    c. Create workgroups and an organizing structure to meet remaining career pathway criteria
        i. What can be done regionally
        ii. What needs to be done locally

3. Next steps for regional career pathways
    a. Communications infrastructure
    b. Who else needs to be at the table?

Advanced Manufacturing/Skilled Trades

Triangle Career Pathway Planning Meeting, December 15, 2015

Attendees from Industry

- Steven Bobbitt, Parata Systems – sbobbitt@parata.com
- Gary Dingess, Parata Systems – gdingess@parata.com
- Alan Fisher, Parata Systems – afisher@parata.com
- David Henderson, Parata Systems – dhenderson@parata.com
- Kevin Johnson, Avintiv – kevin.johnson@avintiv.com
- Denise Marshall, Parata Systems – dmarshall@parata.com
- Tracy Parks, Parata Systems – tparks@parata.com
- Heather Rehder, bioMerieux - heather.rehder@biomerieux.com
- Key Winkler, Waste Industries – key.winkler@wasteindustries.com
- Joe Zuech, Bell and Howell – joe.zuech@bhemail.com

Attendees from Public Schools, Community Colleges, Workforce Boards, and Community Organizations

- Stephanie Ayers, Project Manager, Advanced Manufacturing Skills Training Alliance, Vance-Granville Community College – ayerss@vgcc.edu
- Alfreda Barnett, Strategic Initiatives Manager, Capital Area Workforce Development Board – alfreda.barnett@wakegov.com
- Stephen Barrington, Business Engagement Director, Capital Area Workforce Development Board – stephen.barrington@wakegov.com
- Ken Berger, Piedmont Community College – ken.berger@piedmontcc.edu
- Jean Blaine, Director of Occupational Extension, Vance-Granville Community College – blainej@vgcc.edu
- Eric Breit, Strategic Initiatives Director, Capital Area Workforce Development Board – eric.breit@wakegov.com
- Mike Cobb, Piedmont Community College – michael.cobb@piedmontcc.edu
- Patrick Coin, Assistant Dean, Applied Technologies Programs – coinpg@durhamtech.edu
- Joy Curry, Director, Career Pathways Program, Wake Tech Community College– jdcurry@waketech.edu
- Jeff Curtis, Business Engagement Director, Capital Area Workforce Development Board – jeff.curtis@wakegov.com
- Stephanie Deese – Stephanie.deese@wakegov.com
- Nicole Dunevant, Piedmont Community College – nicole.dunevant@piedmontcc.edu
- Blondelle Edgerton, Director WIA, Vance-Granville Community College – edgertonb@vgcc.edu
- Ronnie Ferotti, NCWorks Career Center – rferotti@edsisolutions.com
- Ben Foti, Youth Program Coordinator, Kerr-Tar Workforce Development Board – bfoti@kerrtarcog.org

Attachment 12

CONSTRUCTION INDUSTRY ROUND TABLE

Career Pathway Implementation
Regional Partnership Team

What is a career pathway?

...A clear sequence of coursework, credentials, and supportive services to prepare those looking for work for a natural progression of high-demand jobs, to address the employment demands of our region's industries.

...The career pathway approach reorients existing educational and workforce services from myriad disconnected programs toward one system focused on individuals' postsecondary and economic success.

From: Career Pathways Toolkit: A Guide for System Development

U.S. Department of Labor

Goals for Today's Meeting

- To learn from area employers about their construction and building trades in-demand labor demands
- To begin to align career pathways with labor demands
  - Curriculum, credentials, career awareness, work-based learning, multiple points of entry and exit
- To discuss the next steps for our regional process for career pathway development

Businesses Represented

- Baker Roofing
- Kimley-Horn and Associates Inc.
- Newcomb and Company
- Raleigh Fire Department
- Stone Truck Parts
- Rapid Response Experts
- ElectriCities
- McDonald-York Building Company
- Avintiv
- HBA of Durham, Orange, and Chatham
- Sears Contracting

Top ten in-demand occupations in construction (NAICS 23) in the Triangle

Title	Current Employment	Regional Average Wage[1]	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand
Construction Laborers	4,182	$27,000	527	561	1,088
Electricians	3,119	$39,400	264	431	695
Carpenters	3,551	$34,100	296	315	611
Pipelayers, Plumbers, Pipefitters, and Steamfitters	2,336	$46,000	173	276	448
First-Line Supervisors of Construction Trades and Extraction Workers	2,357	$56,100	106	256	361
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,436	$41,800	121	204	325
Construction Equipment Operators	1,371	$35,800	123	164	287
Helpers, Construction Trades	1,461	$26,400	88	179	266
Office Clerks, General	1,256	$29,300	138	101	239
General and Operations Managers	914	$135,700	122	101	222

Source: JobsEQ®

Top ten in-demand occupations in architecture and engineering (NAICS 5413) in the Triangle

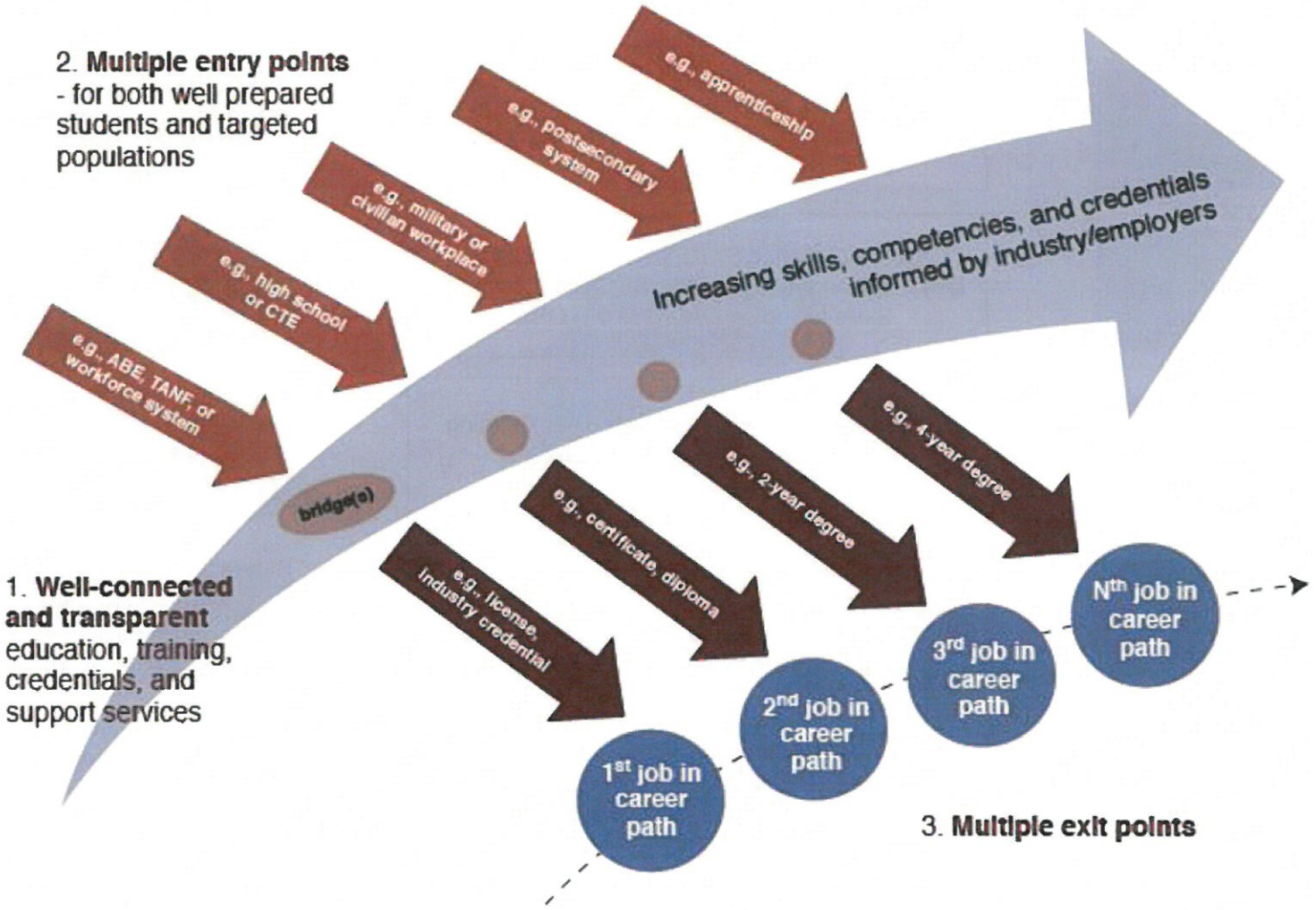
Title	Current Employment	Regional Average Wage[1]	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand
Civil Engineers	1,094	$77,500	159	120	279
Architects, Except Naval	960	$78,700	99	101	200
Mechanical Engineers	533	$83,800	92	76	169
Engineering Technicians, Except Drafters	697	$53,900	87	65	152
Drafters	922	$50,600	63	61	124
Electrical and Electronics Engineers	456	$87,800	54	49	103
Architectural and Engineering Managers	384	$139,200	56	40	96
Surveyors, Cartographers, and Photogrammetrists	327	$66,600	52	26	78
Construction and Building Inspectors	263	$50,000	39	33	72
General and Operations Managers	296	$135,700	39	29	69

Source: JobsEQ®

Questions

- ❑ Write down your three most critical needs, in terms of specific positions/occupations.
- ❑ What are their requirements, in terms of experience, education, and certifications?
- ❑ Where are your needs shifting the most?
- ❑ How does an employee advance within your company?
- ❑ Do they share common skill requirements and/or fall within similar occupational categories?

Career Pathways Model

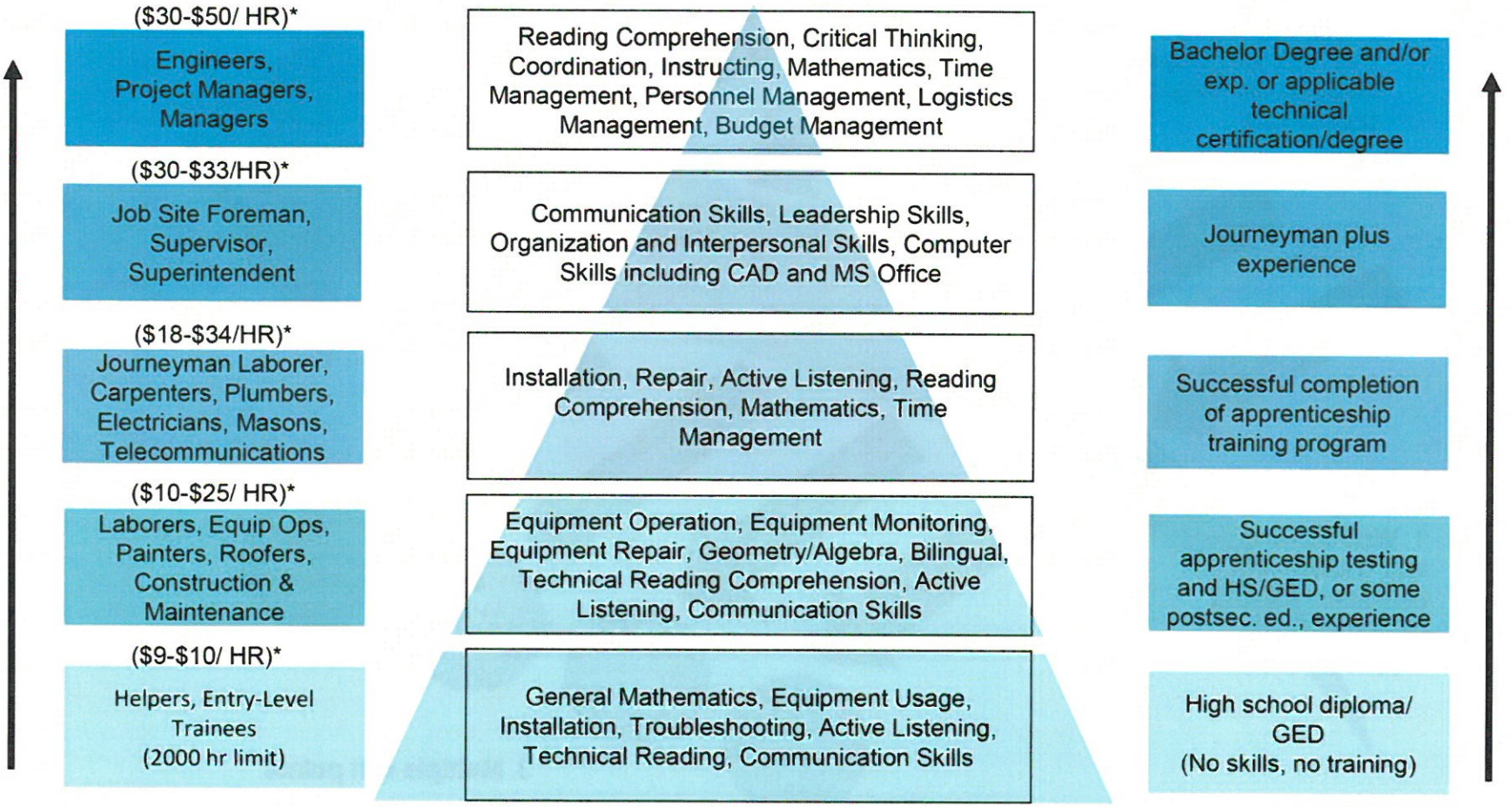


From: Shared Vision, Strong Systems: The Alliance for Quality Career Pathways Framework

Commercial Construction
CAREER PATHWAYS MAP

CENTRAL IOWA WORKS

For additional Information :
Sue Gibbons,
515-286-4996
sgibbons@desmoinesmetro.com



*Base wage rate not including benefits.
**Information required by employers with application includes, work history, GPA, attendance record, and transcripts.

Aligning Pathway with Demand

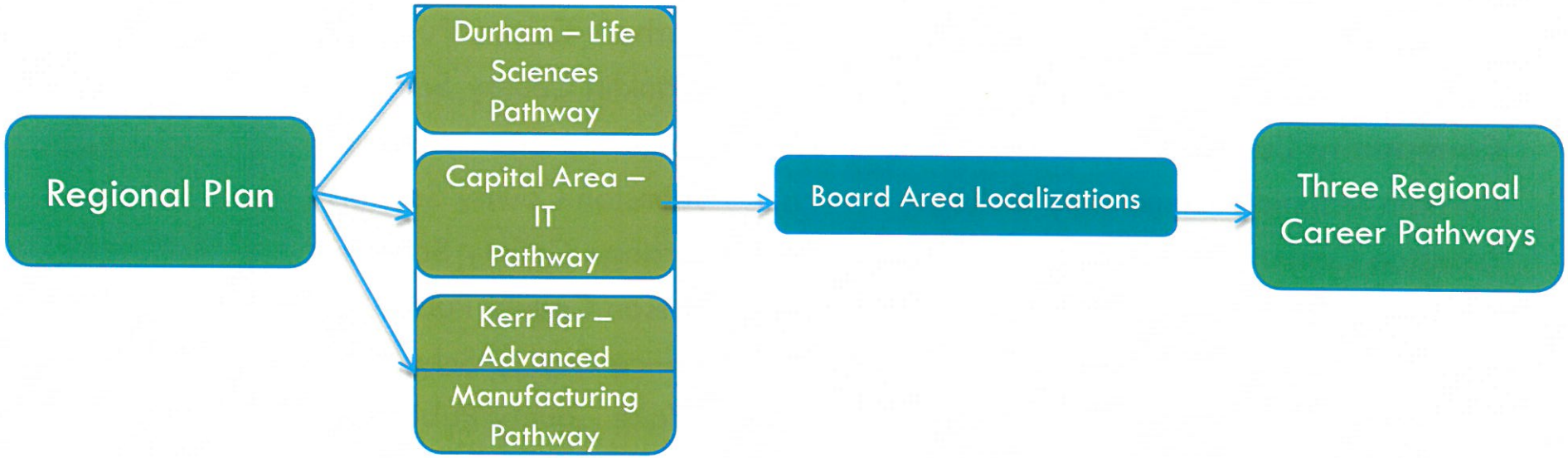
- Curriculum and credentials
- Career awareness
- Work-based learning
- Multiple points of entry and exit

NCWorks career pathway criteria for certification (with examples of supporting documentation suggested for application)

- Career awareness
  - Career awareness strategy/plan
  - Strategic plan for training
  - Professional development activities for advisors
- Articulation and coordination
  - Academic coordination agreements
- Work-based learning
  - WBL strategy/plan
  - Number of committed opportunities
  - Industries represented
- Multiple entry/exit points
  - Pathway map
  - Occupations along pathway
  - Credentials needed for each entry/exit point
- Evaluation
  - Evaluation criteria and plan
  - Enrollment and completion goals/progress toward goals

Regional Career Pathways - North Central Region

Durham, Kerr-Tar and Capital Area



Current Regional Partnership Members

Local Area Boards

Capital Area Workforce Development Board
Durham Workforce Development Board
Kerr-Tar Workforce Development Board

Community Colleges

Durham Technical Community College
Johnston Community College
Piedmont Community College
Vance-Granville Community College
Wake Technical Community College

Community Agency Partners

Made In Durham

Public Schools

Caswell County Schools
Chapel Hill Carrboro City Schools
Durham County Public Schools
Franklin County Schools
Granville County Schools
Johnston County Schools
Orange County Schools
Person County Public Schools
Vance County Schools
Wake County Public Schools
Warren County Public Schools

Discussion and Next Steps

Triangle Regional
Career Pathways Collaborative

ATTACHMENT 3

COLLABORATION

List of Attachments:

1. Kerr-Tar Team Members
2. Attendee list for TRCPC CTE director career pathway planning meeting, March 18, 2016
3. Notes from TRCPC CTE director pathway planning meeting, March 18, 2016
4. Agenda for TRCPC CTE director pathway planning meeting, April 11, 2016
5. Attendee list for TRCPC CTE director pathway planning meeting, April 11, 2016
6. Notes from TRCPC CTE director pathway planning meeting, April 11, 2016
7. Attendee list for TRCPC CTE director pathway planning meeting, April 28, 2016
8. Notes from TRCPC CTE director pathway planning meeting, April 28, 2016
9. Agenda for TRCPC CTE director pathway planning meeting, May 23, 2016
10. Attendee list for TRCPC CTE director pathway planning meeting, May 23, 2016
11. Agenda for TRCPC planning meeting facilitated by the Institute for Coalition Building, February 17, 2016

12. Attendee list for TRCPC regional planning meeting, May 6, 2016
13. Notes for TRCPC regional planning meeting, May 6, 2016
14. Agenda for TRCPC planning meeting facilitated by the Institute for Coalition Building, June 14, 2016
15. Attendee list for TRCPC planning meeting facilitated by the Institute for Coalition Building, June 14, 2016
16. Proposed TRCPC organizing structure, based on model from the Institute for Coalition Building
17. Career pathway assessment tool, provided by the Institute for Coalition Building
18. Kerr-Tar Stakeholders Meeting Agenda, Oxford NCWorks Career Center, March 24, 2016
19. Kerr-Tar Stakeholders Meeting Attendee List, Oxford NCWorks Career Center, March 24, 2016

Team Members—Kerr-Tar Collaborators

Name	Job Title	Agency	Role in Pathway Development
Vincent Gilreath	Workforce Development Director	Kerr-Tar Workforce Development Board	Project Management and Workforce Development Board Representative
Lou Grillo	Business Service Representative	Kerr-Tar Workforce Development Board	Project Management and Workforce Development Board Representative
Stephanie Ayers	AMSTA Program Director	Granville County Schools	Public School Representative
Reba Bullock	College Liaison, Granville Early College High School	Vance-Granville Community College	Community College Early High School Representative
Nicole Dunevant	Dean, Workforce Development	Piedmont Community College	Community College Continuing Education Representative
Debra Harlow	Adult Basic Education Director	Piedmont Community College	Community College Continuing Education Representative & Workforce Development Board Representative
Laureen Jones	Franklin County CTE Director	Franklin County Schools	Public School Representative-CTE
Elizabeth Standafer	Caswell County CTE Director	Caswell County Schools	Public School Representative-CTE
Ken Wilson	TAACCT Coordinator	Vance-Granville Community College	Community College Representative

TRCPC CTE Strategic Planning Meeting
March 18, 2016

Team Member	Organization
Stephanie Deese	Kerr-Tar Workforce Development Board
Patricia Harris	Orange County Schools
Joy Franklin	Wake County Public Schools
Laureen Jones	Franklin County Schools
Roger Shackleford	Kerr-Tar Workforce Development Board
Malinda Todd	Durham Workforce Development Board
Lee O'Neal	Department of Public Instruction
Stephanie Smith	Orange County Schools
Derrick Fogg	Warren County Schools
Judy Bradsher	Person County Schools
Kathi Breweur	Chapel Hill Carborro City School
Stan Winborne	Granville County Public Schools
Eric Breit	Capital Area Workforce Development Board
David Wehbie	Wake County Public School System

Certified Career Pathways Meeting

Friday, March 18, 2016
9:00 am – 12:00 pm

NC Works Career Center – Boardroom
1830-B Tillery Place, Raleigh, NC 27604

Strengths	Weaknesses

• Growing Business/Employment
• Relationships
  ○ Public Schools
  ○ Community Colleges
  ○ Workforce Boards
• Historic Work with Pathways
• Strong CTE Programs
• Common Strategic Plan
  ○ Large and Small
	• Community Colleges all independent
	• CDC
	  ○ Schools staffed differently
	• Define Pathways
	  ○ Advanced Manufacturing
	• Equity of Opportunity
	• Balance of Industry Needs
	  ○ Large and Small

Opportunities	**Threats**

• Common Strategic Plans
  ○ Region
• Economic Growth
• Regional Awareness
  ○ Work-based learning
  ○ CTE Programs
  ▪ Credentials
• Strengthening Pipeline/Increasing Flow Through It
• Program Review
	• Balancing Local and Regional Needs
	• Budget Cuts
	• Dynamic Economy
	• Image of CTE
	  ○ Principals
	  ○ Parents
	  ○ Students

Change Descriptions: (Goals)

- Define What to Market
  - Pathways and CTE
    - What is a Pathway?
  - Employment Data
    - Make Principals/Parents/Students Aware
- Develop and Advertising Campaign
  - Career Guidance Materials
- Identify Customers (Every that needs to be at the table)
  - Business/Industry
  - School Staff
  - Community College Staff
  - Community (Stakeholders: County Commissioners, Civic Organizations)
  - Parents
  - Students

Action Plans (To be continued...)

- Define the Intermediary
  - Designate a Champion
- Professional Development (Training of Pathways for All Customers: Teachers, Counselors, CDCs)
  - Strategy: Develop a Sequence of Presentations that Lead to a Certificate:
  - What is a Pathway, Cluster, Academy?
  - Help customers understand that education in this current state is not working (i.e. Choosing "Electives" for fun, rather than as a Career Pathway)
- Increase Work-based Learning Opportunities

Next Meeting

Monday, April 11, 2016
9:00 am – 12:00 pm

NC Works Career Center – Boardroom
1830-B Tillery Place, Raleigh, NC 27604

Goals:

1) Continue to develop action plans and strategies to achieve the broad goals set in 3/18/16 meeting
2) Set a timeline
3) Plan next steps

Wake County
Pathways to Prosperity
Career Information and Advisement
April 11, 2016

Presiding: Eric Leazer, ESL Consulting, (704) 213-3699

Objectives:

- **Develop comprehensive strategies for the goals set at the March 18 meeting**
- **Provide information to determine the following: Who, What, When and How**

AGENDA

9:00 **Sign in and networking**

9:15 **Welcome** — **David Wehbie**

9:20 **Purpose/Review** — **Eric Leazer**

9:45 **Strategic Planning:**

- **Develop strategies (action steps)**
  - **Who, What, When and How you will measure success**

11:45 **Report (summarize the work of the day)**

- **Next meeting?**

12:00 **Adjournment**

Strategic Planning Meeting
April 11, 2016

Team Member	Organization
Joy Franklin	Wake County Public Schools
Laureen Jones	Franklin County Schools
Stephanie Smith	Orange County Schools
Kathi Breweur	Chapel Hill Carborro City School
David Wehbie	Wake County Public School System
Rick Sheldahl	Durham Public Schools
Tim Harrell	Johnston County Schools
Judy Bradsher	Person County Schools
WV Yarbrough	NC Works
Eric Breit	Capital Area Workforce Development Board

Central Region
Career Information and Advisement Committee
April 12, 2016
Meeting Notes

- **The Central Region, Career Information and Advisement Committee held its 2nd meeting on Monday April 12, 2016. The meeting was held in the board room at the NC Works Career Center located at 1830 Tillery Place in Raleigh. The Committee membership is made up of Career and Technical Education Administrators, Career Development Coordinators, and Workforce Development Board employees in the region.**

- **Mr. David Wehbie, Career and Technical Education (CTE) Director for the Wake County Public School System, welcomed the group and conducted introductions.**

- **Mr. Eric Leazer, facilitator and President of ESL Consulting, provided a presentation (attached) in order to reflect the progress of the previous meeting and focus the group on the goals for the day. Mr. Leazer reviewed the purpose of the Career Information and Advisement Committee, which is to develop a strategic plan to market the Certified Career Pathways being developed in the region. In addition, Mr. Leazer stated the assignment for the day: to develop strategies (action steps) to accomplish the strategic plan goals of the group established at the March 18, 2016 meeting.**

- **Following the presentation, Mr. Leazer assisted in guiding the group through the strategic planning process by reviewing the existing goals and asking for input regarding strategies (action steps) to accomplish the goals, a time line and person responsible for each goal and accompanying strategy.**

- **Mr. Rick Sheldahl, CTE Director for the Durham Public Schools requested additional information regarding the development of the strategic plan. This led to a discussion regarding the following topics:**
  - **The Workforce Development Board's alignment in the region as it relates to the development of the Certified Career Pathways.**
  - **Alignment of the Workforce Development Board's work. Mr. Sheldahl asked specifically if a templated had been developed to assure compatibility between the pathways developed in the various regions.**
  - **The purpose and function of the Career Information and Advisement Committee. In particular, the overall purpose of the marketing plan being developed.**

- **Ms. Laureen Jones, CTE Director for Franklin County Schools, also questioned the communications between the various workforce boards as well as their communication with the CTE Directors in the school districts. In addition, she questioned a possible duplication of effort between the workforce boards in regard to the development of the Certified Career Pathways. She stated that Franklin County was split between 2 regions and did not want to replicate the pathways work.**
- **Mr. Eric Brite, Strategic Initiatives Director of the Capital Area Workforce Board addressed the issue of duplication of effort. He assured the group that the Certified Career Pathways being developed would be from the same template and would be universal in application to any of the schools or school districts in the region. Mr. David Wehbie supported Mr. Brites assessment and stated that the pathways would be "regionally developed but locally customizable."**
- **Mr. Wehbie suggested that the group review the current goals and add new ones if necessary.**
- **At 10:45, Mr. Leazer suggested instructed the group to take a 15 minute break. He asked the group to reconvene at 11:00.**

- **Following the break, Mr. Leazer led the group in a review of the existing goals. The group decided that all of the goals were valid and added the following:**
  - **Identify a "Champion" for the Certified Career Pathways Initiative.**
  - **Hire a "Central Regional Consultant" to represent the CTE Directors at all of the regions Workforce Development meetings and compile and submit the regions Certified Career Pathway proposals to the Department of Commerce for accreditation.**
- **Ms. Kathi Brewer, CTE Director for the Chapel-Hill Carrboro City Schools, questioned the need to hire a regional consultant. Mr. Sheldahl answered that the CTE Directors did not have time to attend all of the regional workforce meetings. Also, the regional consultant would be responsible for the preparation and submission of the pathways for certification. He cited the example of the work done by Mr. Rob Boyce, regional consultant for the Northeast region.**
- **Mr. Wehbie suggested that we set a date for the next meeting. The group agreed on Thursday, April 28, 2016 as the next meeting date. The meeting will be held from 9:00 am until 12:00 pm in the same location.**
- **The focus of the next meeting will be to develop strategies and a timeline for each of the goals of the strategic plan.**
- **The meeting was adjourned at 11:45 am.**

Strategic Planning Meeting
April 28, 2016

Team Member	Organization
Patricia Harris	Orange County Schools
Stephanie Smith	Orange County Schools
David Wehbie	Wake County Public School System
Rick Sheldahl	Durham Public Schools
Judy Bradsher	Person County Schools

Central Region
Career Information and Advisement Committee
April 28, 2016
Meeting Notes

- **The Central Region's Certified Career Pathways, Career Information and Advisement Committee held its 3rd meeting on Monday, April 28, 2016. The meeting was held in the board room at the NC Works Career Center located at 1830 Tillery Place in Raleigh, North Carolina.**

- **Mr. Eric Leazer, facilitator, and President of ESL Consulting, welcomed the group and then provided a presentation (attached).**

- **Mr. Leazer led the group discussion toward the development of the strategic marketing plan for certified career pathways (CCP). During the discussion several questions and concerns arose regarding the actual product (regional certified career pathways) to be marketed. In particular, there is concern among the various Career and Technical Education (CTE) directors with regard to the Workforce Development Board - their role as it pertains to the development of the certified career pathways and the related regional business partnership. This led to a discussion regarding the following topics:**
  - **The Workforce Development Board's alignment in the region as it relates to the development of the Certified Career Pathways.**
  - **Alignment of the Workforce Development Board's work. Mr. Rick Sheldahl asked specifically if a template had been developed to assure compatibility between the pathways developed in the various regions.**
  - **The purpose and function of the Career Information and Advisement Committee. In particular, the overall purpose of the marketing plan being developed.**

- **The group moved to table the development of the marketing plan until they receive additional information addressing the questions and concerns (listed above). In order to obtain the information required, the following assignments were given and are to be completed by the membership prior to our next meeting:**

  - **Have consultants from all three Workforce Development Boards attend the May 23, 2016 meeting and participate in a question and answer (Q&A) session with the CTE Directors. Eric Breit, Strategic Initiatives Director from the Capital Area Workforce Board, will contact the other Workforce board consultants and invite them to attend the meeting. In addition, Mr. Breit volunteered to contact Deon Clark from NC Works Pathways program to attend the next meeting and participate in the Q&A session.**
  - **Each CTE Director will bring a sample pathway they have developed in their school districts. The pathways will be reviewed and discussion will be held in order to determine the necessity of the development of a regional Certified Career Pathways template.**
  - **The CTE Directors in the region will develop a facilitator's "scope of work" for the 2016-17 school year.**

- **The meeting was adjourned at 11:45 am.**
- **The next meeting will be held on Monday, May 23, 2016 from 9:00 am until 12:00 pm in the same location.**

Wake County
Pathways to Prosperity
Career Information and Advisement
May 23, 2016

Presiding: Eric Leazer, ESL Consulting, (704) 213-3699

Objectives:

- **Participate in a question and answer session with Workforce Development Board members (3 regions)**
- **Participate in the development of a universal pathway template**
- **Develop a facilitators "scope of work" for the 2016-17 school year**
- **Receive "how to" information on Basecamp software**
- **Participate in the development of a strategic marketing plan for certified career pathways**

AGENDA

9:00	**Welcome**	**Eric Leazer**
	Focus and Review	
9:15	**Q&A with Workforce Development**	**Eric Breit**
10:00	**Intro to Basecamp 101**	
10:15	**Universal Certified Career Pathway Template**	**David Wehbie**
11:00	**Facilitators "scope of work" 2016-17 school year**	
11:30	**Strategic Planning:** • **Develop strategies (action steps) for each goal** • **Develop a timeline of implementation**	**Eric Leazer**
11:50	**Report (summarize the work of the day)** • **Next meeting?**	
12:00	**Adjournment**	

Wake County
Pathways to Prosperity
Career Information and Advisement
May 23, 2016
Presiding: Eric Leazer, ESL Consulting, (704) 213-3699

Objectives:

- **Participate in a question and answer session with Workforce Development Board members (3 regions)**
- **Participate in the development of a universal pathway template**
- **Develop a facilitators "scope of work" for the 2016-17 school year**
- **Receive "how to" information on Basecamp software**
- **Participate in the development of a strategic marketing plan for certified career pathways**

ATTENDEE LIST

David Wehbie, Wake County Public Schools
Tim Harrell, Johnston County Schools
Stephanie Smith, Orange County Public Schools
Rick Sheldahl, Durham Public Schools
Kathi Breweur, Chapel Hill Carrboro Schools
Malinda Todd, Durham Workforce Development Board
Roger Shackleford, Kerr-Tar Workforce Development Board
Eric Breit, Capital Area Workforce Development Board

MADE IN DURHAM
Preparing Our Youth for Careers

Building Collective Capacity for Career Pathways: A Workshop with the Institute for Coalition Building

Wednesday, February 17, 2016
1:00 – 5:00 p.m.

Purpose

Building NCWorks certified career pathways is uncharted territory for many of us. We are being challenged to work in new ways that set aside boundaries between communities, institutions and target populations. This workshop will explore concrete tools and frameworks to support our work at a whole-systems level. The focus will be on learning how we can build our collective capacity so our collaboration becomes not *more* work, but *the* work. We will leave the workshop with a common vocabulary and core principles we can use as we work with a broader group of stakeholders across the region to build a career pathways system.

Agenda

1:00 p.m.	Welcome and Introductions (15 minutes)
1:15 p.m.	Made in Durham and Career Pathways Overview (15 minutes)
1:30 p.m.	Goals for the afternoon (15 minutes)
2:15 p.m.	An Overview of the Collaborative Engagement Process (45 minutes) (A common language and common approach—continuous communication)
3:00 p.m.	The Collaborative Engagement Process (50 minutes)

Who: Get the career pathway system into the room
- Who are the stakeholders in this system?
- Who are the decision-makers?
- Who is responsible for ensuring success?

Why: Help people to see the career pathway as a system
- Why are we working together and why is this challenge worth addressing?
- Why does the existing education-to-career system produce the current outcom

3:50 p.m.	Mid-afternoon Break (10 minutes)
4:00 p.m.	The Collaborative Engagement Process (45 minutes)

MADE IN DURHAM

Preparing Our Youth for Careers

Jack Hess serves as the Executive Director of the Institute for Coalition Building (ICB), an organization that nurtures leaders collectively to solve grand challenges. Prior to his work with ICB, he was the President of the Columbus Area Chamber of Commerce where he set in place an aggressive strategy of building on the power of the place, increasing member engagement and promoting the principles of entrepreneurship and innovation. Within two years of implementing its new strategic plan, the Columbus Chamber was named the Indiana Chamber of the Year in 2008. One year later, the American Chamber of Commerce Executives (ACCE) presented the Columbus Chamber with the National Chamber of the Year Award. While at the Chamber, he helped champion a number of collaborative projects including the state-of-the-art Advanced Manufacturing Center of Excellence, the formation of a regional learning system through Economic Opportunities 2015, an online training academy for entrepreneurs called SmallBizU, the Indiana University Center for Art+Design, and the formation of the downtown Chamber Arts District.

Strategic Planning Meeting
May 6, 2016

Team Member	Organization
Stephanie Deese	Kerr-Tar Workforce Development Board
Roger Shackleford	Kerr-Tar Workforce Development Board
Ashley Cagle	Wake County Economic Development
Eric Breit	Capital Area Workforce Development Board
Kenneth Wilson	Vance-Granville Community College
Deborah Porter	Johnston County Community College
Lou Grillo	Kerr Tar Workforce Development Board
Malinda Todd	Durham Workforce Development Board
Sherrod Basnight	Made In Durham
Andrea Austin	Durham Public Schools
Matthew Zullo	Wake Technical Community College
Maria Johnson	Durham Public Schools
Patricia Harris	Orange County Schools
David Wehbie	Wake County Public School System
Lauren Coffey	NC Works
Sandra Deitrich	Wake Technical Community College
Amy Halliday	Wake Technical Community College
Melissa Ockert	Durham Technical Community College
WV Yarbrough	NC Works
Debra Harlow	Piedmont Community College
Al McMahill	Durham Public Schools
Patricia Gould	Durham Technical Community College

North Central regional career pathway development

Meeting with Dion Clark, NCWorks Career Pathway Director, May 6, 2016

Our theme: regionally developed, and locally refined

- Career pathways are developed regionally, to leverage resources, strengthen our regional talent pool, and support our regional economy.
- Some career pathway elements are locally catered, to accommodate differences in local resources and priorities, and to address local needs.

Our work to date: building the plane as we are flying it

- Developing infrastructure and systems for long-term sustainability of regional career pathway coordination
- Working towards short-term goal of certifying three career pathways in IT, advanced manufacturing, and health and life science

Notes relate to the eight career pathway criteria

1. Demand driven and date informed
   - Labor market data supports three pathways that we have chosen.
   - Data about commuting patterns supports regional strategy.

2. Employer engagement
   - Industry roundtables
     - Strengths of roundtables
     - Challenges of roundtables
   - Next steps with employer engagement
     - Follow up meeting with employers after developing pathway structure
     - Development of a regional system for ongoing employer engagement

3. Collaborative
   - Strengths of collaboration to date
     - Entities at all levels have been engaged.
     - Collective vision is slowly forming.
     - CTE directors are meeting regularly with workforce boards represented.
     - Workforce board representatives are meeting regularly.
     - Resources are being leveraged and shared.
       - Made in Durham has applied for a grant for steering committee facilitation.

        - WCPSS is paying for consultant to facilitate CTE director meetings.
        - Larger school districts willing to carry cost of ongoing facilitation.
        - Shared facilitation of industry roundtables
- Challenges of collaboration to date
    - Common voice and shared understanding is still being developed.
        - How do we make collective decisions?
        - What are our respective roles?
    - Communication and information sharing across institutions and the region
        - Basecamp
- Development of steering committee

4. Career awareness
    - Career awareness strategies are already taking place locally at different levels.
    - Work is underway to develop regional career awareness strategies.
        - Work of CTE directors
        - Goal of workforce boards and NCWorks Career Center staff to have shared career awareness training

5. Articulation and coordination
    - Work is underway to develop template to synthesize secondary/post-secondary articulation.
    - Job-driven NEG program is a strong model for articulation and coordination between career centers and community colleges for adults.
    - Local examples relevant to articulation and coordination
        - Work of WCPSS and Wake Tech
        - Orange County inclusion in regional pathways
        - Durham's articulation as part of Career and College Promise
        - Others

6. Work-based learning
    - Work-based learning strategies and information gathering are already taking place locally at different levels.
        - Surveys of businesses in Durham and Wake
    - Regional coordination is necessary and will be part of the follow-up meetings with businesses.

7. Multiple points of entry and exit
    - This is being addressed through our collaboration at multiple levels.

8. Evaluation
    - What are existing outcomes tracking mechanisms that can be used as resources for evaluation of career pathways?

DURHAM REGIONAL NETWORK:

Building Regional Career Pathways Using The Stakeholder Engagement Process

Meeting Agenda and Itinerary

DATE

June 14, 2016
10:00 a.m. to 2:00 p.m.

LOCATION

Durham Technical Community College, Multi-Purpose Room, Wynn Center, Building 10

MEETING OBJECTIVE

Presented by a team of pragmatic practitioners, this session "unpacks" the concept of community collaboration and collective impact by demonstrating the principles and practices for transforming a complex social system by ultimately transforming the relationships among people who shape those systems. Through the use of a series of collaborative tools and frameworks, the session teaches and shares a disciplined stakeholder engagement process that creates a common language and a shared way of working together to build regional career pathways at a systems level.

TIME	PROCEEDINGS
10:00 a.m.	Welcome and Introductions (25 minutes) - What do we hope to accomplish with this work beyond the initial certification of pathways?
10:25 a.m.	The Stakeholder Engagement Process (35 minutes) - The Stakeholder Engagement Process: A well-designed, collaborative process acts like a "community operating system" by providing a common language and common approach for working together.
11:00 a.m.	*Who:* Getting the system in the room (30 minutes) - Who wants to take responsibility for the success of the whole system? Whose eyes do we need to get on the challenge? Who has a stake in a challenge when decisions are being made? - *Small Team Discussion:* How could the principles and practices presented within this quadrant of the process improve our collective work around building career pathways? What action steps might we take together?
11:30 a.m.	Mid-Morning Break (15 minutes)
11:45 a.m.	*Why:* Help people see the system (30 minutes) - Why are we working together and why is the challenge worth addressing? Why is the system currently producing the outcomes that it is? - *Small Team Discussion:* How could the principles and practices presented within this quadrant of the process improve our collective work around building career pathways? What action steps might we take together?
12:15 p.m.	Working Lunch (20 minutes)
12:35 p.m.	*What:* Shift the collective focus from problem-solving to co-creation (30 minutes) - What are the high-level things we could do together that no one organization could do alone? What do we want to co-create together? - *Small Team Discussion:* How could the principles and practices presented within this quadrant of the process improve our collective work around building career pathways? What action steps might we take together?

TIME	PROCEEDINGS
1:05 p.m.	*How:* Redesign the system by changing the ways of working together (30 minutes) - How could we organize ourselves and redesign our work to achieve better outcomes? How can we build our collective capacity so our collaboration becomes not more work, but the work? How might we build and strengthen relationships? How is success measured? - *Small Team Discussion:* How could the principles and practices presented within this quadrant of the process improve our collective work around building career pathways? What action steps might we take together?
1:35 p.m.	Open Discussion and Next Steps (25 minutes)
2:00 p.m.	Adjourn

CORE TEAM MEETING

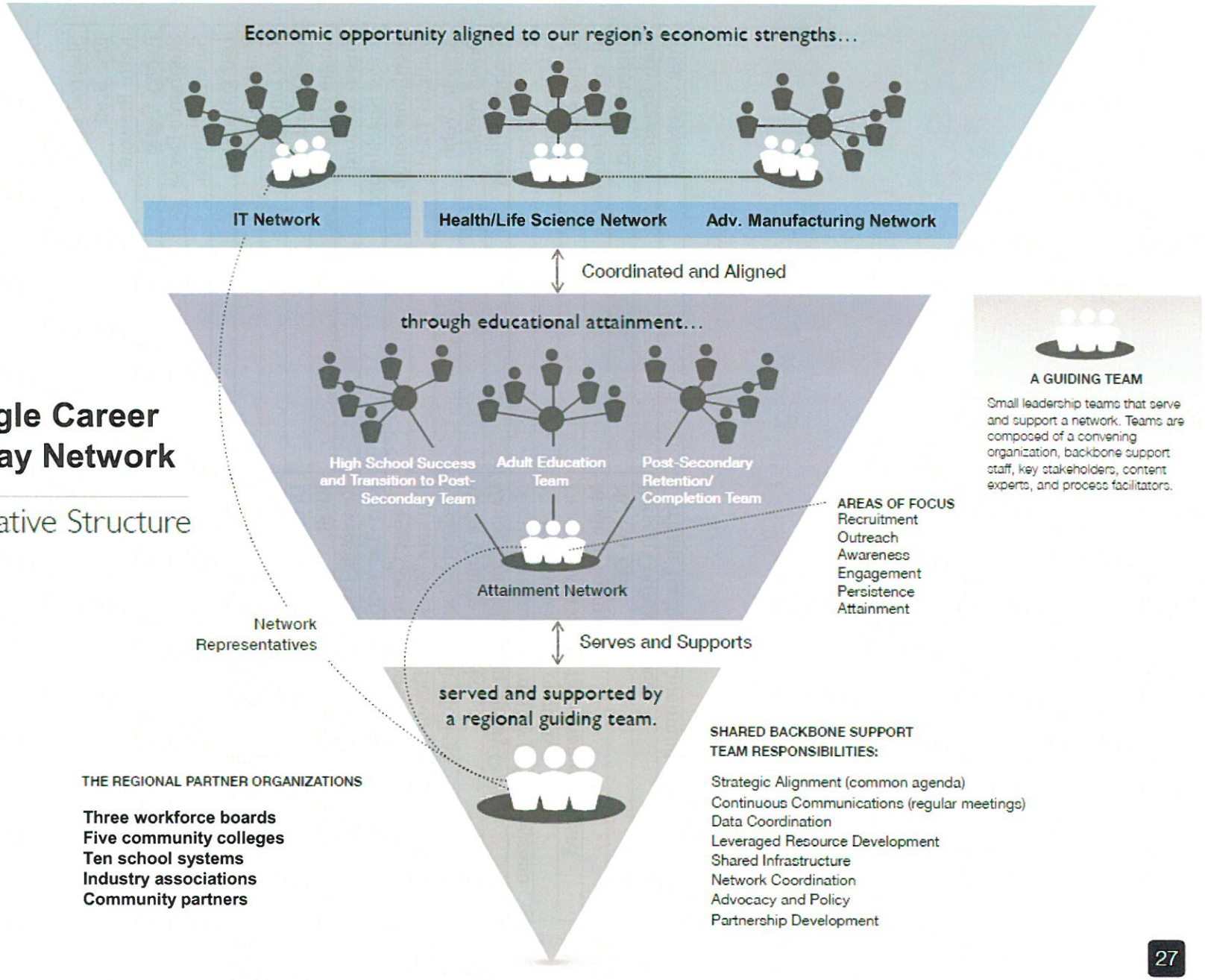
TIME	PROCEEDINGS
2:15 p.m.	Debrief of Day (15 minutes)
2:30 p.m.	Guiding Team Discussion (20 minutes)
2:50 p.m.	Collaborative Structure (25 minutes)
3:15 p.m.	Net Steps Moving Forward (15 minutes)
3:30 p.m.	Adjourn

Regional Career Pathway Planning Meeting
June 14, 2016—Durham Technical Community College

Team Member	Organization
Sherrod Basnight	Made in Durhan
Eric Breit	Capital Area Workforce Development Board
Kathi Breweur	Chapel Hill Carborro City School
Ashley Cagle	Wake County Economic Development
Stephanie Deese	Kerr-Tar Workforce Development Board
Sandra Dietrich	Wake Technical Community College
Laureen Jones	Franklin County Schools
Penny Gluck	Durham Technical Community College
Rob Lindberg	North Carolina Biotechnology Center
Lee O'Neal	Department of Public Instruction
Susan Oney	EDSI
Susan Sanford	Research Triangle Cleantech Cluster (RTCC)
Roger Shackleford	Kerr-Tar Workforce Development Board
Stephanie Smith	Orange County Schools
Malinda Todd	Durham Workforce Development Board
Angela Webb	Piedmont Community College
David Wehbie	Wake County Schools
Kenneth Wilson	Vance-Granville Community College
Bob Witchger	North Carolina Community College System
WV Yarbrough	NC Department of Commerce
Esther Coleman	Durham Workforce Development Board
Merdythe Holmes	Made in Durham
Victoria Knott	NC NG EEC
Judy Bradsher	Person County Schools
Vega Swepson	Durham Technical Community College

Triangle Career Pathway Network

Collaborative Structure



4. REDESIGN THE SYSTEM

Shared Measurement Systems ☐
Has the group identified a common way of measuring success and assessing progress?

The Collaborative Structure ☐
What is the structure for the collaborative—defined customers, guiding team, working teams, support organizations, etc.? Are all of the stakeholders aware of the structure? Did the structure emerge from the context, relationships, and work?

A Common Agenda ☐
Has the group developed a coordinated and aligned work plan, including resources, that visually depicts how the shared outcomes will come to be realized?

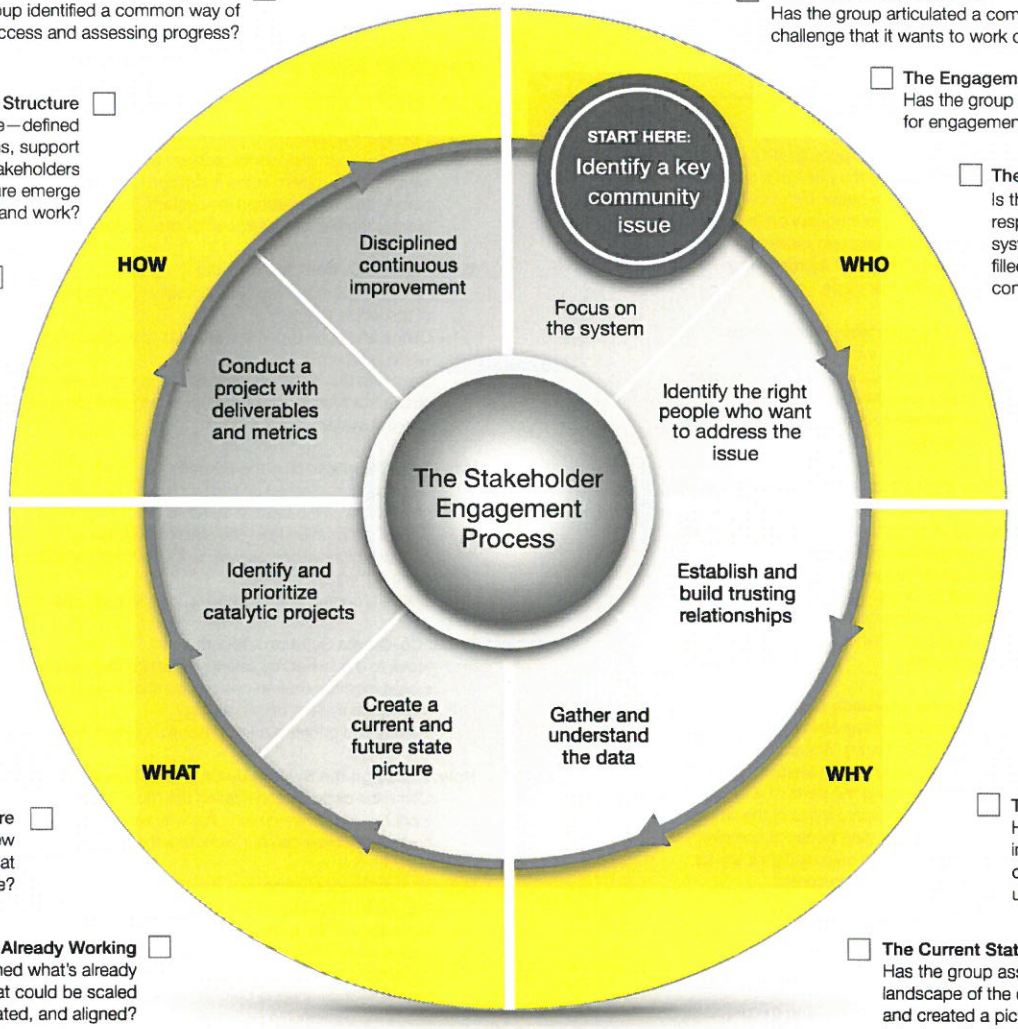
1. GET THE SYSTEM IN THE ROOM

The Compelling Challenge ☐
Has the group articulated a common challenge that it wants to work on together?

The Engagement Process ☐
Has the group defined a collaborative process for engagement to address the challenge?

The Guiding Team ☐
Is there a guiding team who wants to take responsibility for the success of the whole system? Have the key roles been defined and filled: co-convening leadership, key stakeholders, content experts, process facilitator(s)?

The Key Stakeholders ☐
Have the key stakeholders been identified? Have the key relationships been mapped out and made visible to all stakeholders? Is there a strategy for levels of engagement?



BEHAVIORS

BELIEFS

3. CO-CREATE SOLUTIONS TOGETHER

Mutually Reinforcing Actions ☐
Is there a portfolio of projects that offer a combination of substantive short-term wins, as well as more ambitious, long-term systemic strategies that may not show impact for several years?

Co-Creating the Future ☐
Has the group identified and prioritized a few high-level things they could do together that no single organization could do alone?

What's Already Working ☐
Has the group determined what's already working well in the system that could be scaled up, connected, coordinated, and aligned?

2. HELP PEOPLE SEE THE SYSTEM

The Shared Outcomes ☐
Have the stakeholders defined the shared outcomes they expect to achieve and the strengths and capacities they bring to the table?

The Information and Data ☐
Has the group gathered and shared information and data about the challenge? Do they have a shared understanding about the information?

The Current State ☐
Has the group assessed the current landscape of the existing work underway and created a picture of the system as it is today—the "system on a page"?

THE STAKEHOLDER ENGAGEMENT PROCESS

THE STAKEHOLDER ENGAGEMENT PROCESS is a both a way of thinking and a defined way of working together. It creates a kind of "community operating system" that guides and shapes a conversation among a diverse group of stakeholders and provides a common language and a common approach that enables people to collectively address problems at a whole-systems level.

PRINCIPLES: A WAY OF THINKING

Systemness: It's a systems thing, not a single thing.
A social system is made up of the interrelated components of people and groups organized around a clearly defined purpose or goal. Making the parts of a system better doesn't guarantee that the system as a whole will be better. What truly matters is how the parts interact with one another. Yet it is our normal preference to "solve" problems by improving the parts, rather than to reform and redesign the system itself. By redesigning a system, it's possible to "dissolve" a problem by changing the underlying conditions that caused it in the first place.

Relationships: Transforming a system is about transforming relationships.
A system is a set of relationships. The "system" is the way we work together. Transforming a system is ultimately about transforming relationships among people who shape the system. It's everyone's responsibility to understand how these relationships work and how they can be judiciously balanced and shaped over time to fundamentally change the way people work together.

Process: Redesigning a system is a social process; the process is the solution.
Transforming a system requires a well-structured approach for building trusting relationships through which stakeholders can develop a shared understanding of the system and develop a shared commitment to co-create solutions together. A disciplined stakeholder engagement process is a both a way of thinking and a defined way of working together. It creates a kind of "community operating system" that guides and shapes a conversation among a diverse group of stakeholders and provides a common language and a common approach that enables people to collectively address problems at a whole-systems level.

Leadership: Complex systems demand a different approach to leadership.
Systems are composed of both parts and the interrelationships among them, and each of these aspects must be tended to in very different ways. Accordingly, complex systems are best served by two complementary styles of leadership that act in concert. Organizational leadership works on improving the parts of a system (efficiency). Collective leadership works on developing the relatedness of the whole toward the essential purpose of the system (effectiveness). And because complex systems cannot be controlled, there must be a willingness to take responsibility for the well-being of the whole by operating in service, rather than in control.

How do the four principles relate to and complement one another?

How do you solve a complex social problem?
↳ You dissolve it by redesigning the underlying system that's causing the problem.
How do you redesign a system?
↳ By transforming relationships among those people who shape the system.
How do you transform relationships?
↳ Through well-structured processes that help people work together in new ways.
What kind of leadership is needed?
↳ Complex systems demand two complementary styles of leadership that act in concert: organizational leadership (efficiency of the parts) and collective leadership (effectiveness of the whole)

PRACTICES: A WAY OF WORKING TOGETHER

Focus on the System
- Dissolve a complex social problem by redesigning the underlying system causing the problem in the first place
- Name, define, and scope the system. To name something is to make it real.
- Identify the essential purpose or aim of the system

Who: Get the System in the Room
- Form a guiding team whose collective leadership will ensure the effectiveness of the whole system
- Define and agree upon the process of engagement and the timeline for working together
- Start with the "who": Identify and map the stakeholder relationships that most shape the system. Use the map to convene the stakeholders over time and "get the system in the room."

Why: Help People to See the System
- Next, create a shared understanding of the system by asking "why." Ask the group: Why is the system currently producing the outcomes that it is?
- Collect information from the stakeholders about the work that is underway (primary information), as well as the existing data about the current state of the system (secondary data)
- Create a current state picture so people can "see" the system

What: Co-Create Solutions Together
- Move to the "what" by asking: What are the system-level things we could co-create together that no one organization could do alone? What outcomes should the system be producing?
- Identify and prioritize a few catalytic "system redesign" projects

How: Redesign the System by Changing Ways of Working Together
- Come full-circle by considering the "how." Ask: How will we coordinate the work? How can we change the way we work together? How will success be measured? How can our work together be sustained?

Repeat: Continuously Improve the Work and the Process Itself
- Repeat the process. In the spirit of continuous improvement, prepare to unfold the stages of the process again by examining what went well and what needs further work. Notice how the process provides a disciplined way of having a collective conversation that evolves along wth the system itself; it simultaneously shapes both the beliefs and the behaviors of the stakeholders within the system.

Kerr Tar Workforce Development Area

NCWorks Career Pathway Project

Advanced Manufacturing

March 24 2016

Objectives

- Understand the key requirements of the project
- Review current state of advanced manufacturing career pathway development in the area
- Identify and plan next steps

AGENDA

• Welcome and introductions	Lou Grillo
• Meeting purpose	Roger Shackleford
• Key expectations-NCWorks project	
• Current area career pathway development	
• Gap Identification	
• Next steps	

SIGN IN SHEET
Date: March 24 , 2016

Please Print!

NAME	EMAIL ADDRESS	AGENCY
Susan Olney	Soney@edsiSolutions.com	
DALE FEY	Feyd e vgcc.edu	CONT ED
Roger Shinkle Ford	Kerr Tar	
Stephanie Deese	stephanie.deese@nc.rr.com	Wake County/ Kerr-Tar WDB
Walter Montgomery	walter.montgomery@piedmontcc.edu	Piedmont CC
Deborah Cozart	dcozart@kerrtarcog.org	Kerr-Tar WDB
Blondelle Edgerton	edgertonb@vgcc.edu	Vance-Granville CC
Angela Webb	Angela.Webb@piedmontcc.edu	Piedmont Community College
Lauren G. Jones	laureengjones@fcschools.net	Franklin County Schools
Judy Bradsher	bradsherj@person.K12.nc.us	Person County Schools
Laureen ~~Lauren~~ Jones	~~lauren~~	
	laureengjones@fcschools.net	

franklin county schools

Attachment 19

Triangle Regional
Career Pathways Collaborative

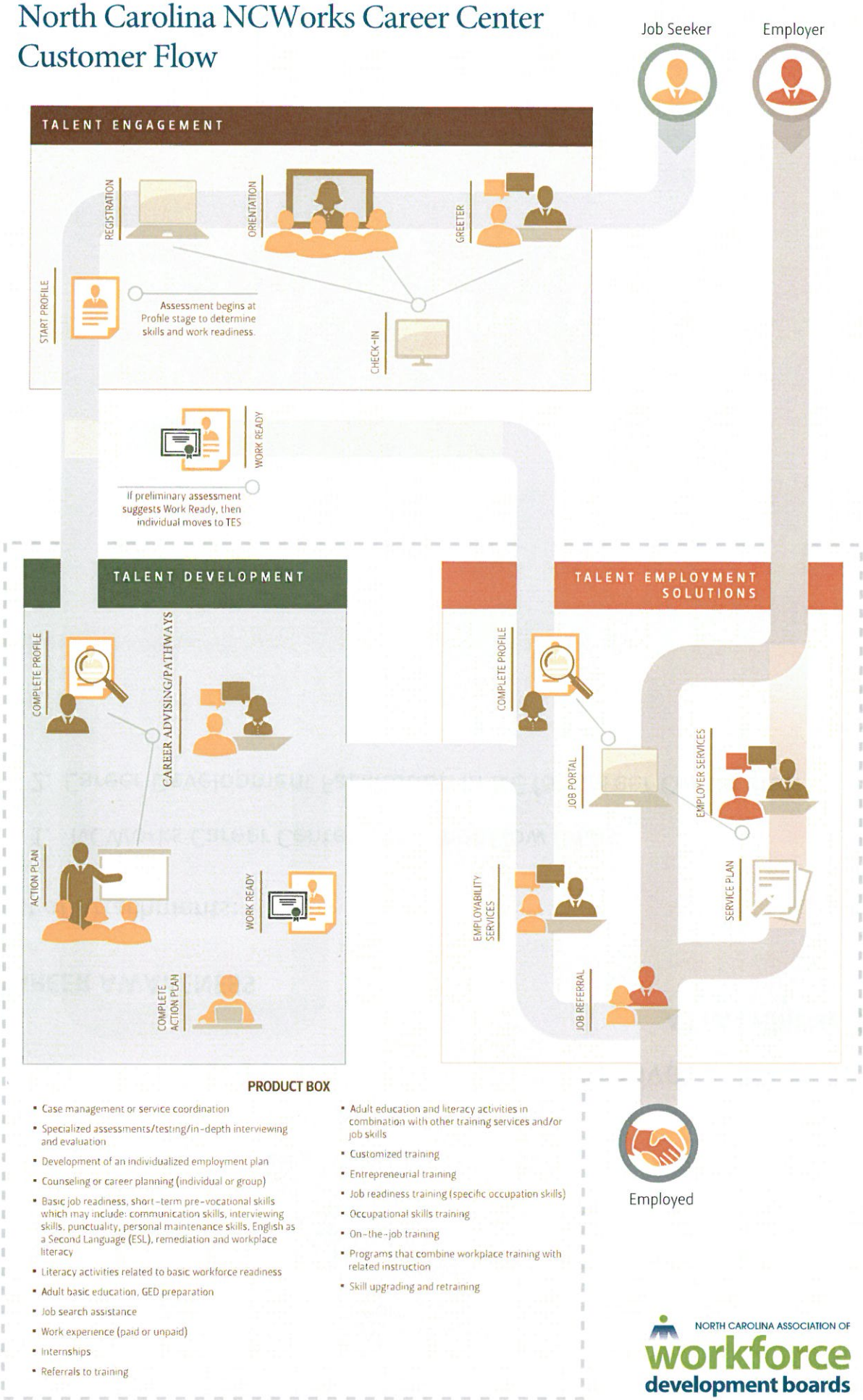
ATTACHMENT 4

CAREER AWARENESS

List of Attachments:

1. NCWorks Career Center Customer Flow Chart
2. Career Development Facilitation in NC for Career Center staff

North Carolina NCWorks Career Center Customer Flow



PRODUCT BOX

- Case management or service coordination
- Specialized assessments/testing/in-depth interviewing and evaluation
- Development of an individualized employment plan
- Counseling or career planning (individual or group)
- Basic job readiness, short-term pre-vocational skills which may include: communication skills, interviewing skills, punctuality, personal maintenance skills, English as a Second Language (ESL), remediation and workplace literacy
- Literacy activities related to basic workforce readiness
- Adult basic education, GED preparation
- Job search assistance
- Work experience (paid or unpaid)
- Internships
- Referrals to training
- Adult education and literacy activities in combination with other training services and/or job skills
- Customized training
- Entrepreneurial training
- Job readiness training (specific occupation skills)
- Occupational skills training
- On-the-job training
- Programs that combine workplace training with related instruction
- Skill upgrading and retraining

NORTH CAROLINA ASSOCIATION OF workforce development boards

Statewide Plan for Career Development Facilitator Training

Background

As you are aware, a comprehensive training needs survey was conducted in the late fall of 2015 to identify the critical skills needed by front line and management staff of the NCWorks Career Centers. One of the primary recommendations stemming from the analysis of the surveys is the need for building the career guidance and career advising skills of center staff.

The work groups that had input into the survey project strongly recommended the Career Development Facilitator (CDF) training course as a potential vehicle for providing training in these skills. Advantages of using this delivery method are:

1. CDF is a standardized, nationally accepted curriculum.
2. CDF curriculum is built on twelve competencies that all workforce professionals need and that closely align with the competencies identified in North Carolina.
3. CDF is affordable.
4. Regional course offerings can easily be provided through an existing DWS/Training Center contract for course management, which allows for a quick start up and flexible delivery.

Statewide plan for training

- The Division of Workforce Solutions has endorsed completion of the Career Development Facilitator (CDF) training as the skills foundation for staff in the NCWorks Career Centers who work in a career advising role.
- Beginning in August 2016, the NCWorks Training Center will offer "closed enrollment" regional CDF courses exclusively for staff of the career centers.
- The initial 3 regional courses will run concurrently from August – December 2016, giving 35 staff per course (105 total) an opportunity to complete CDF training.
- Each calendar year thereafter, the Training Center will offer 6 closed enrollment courses (210 staff) until all career center staff have the opportunity to complete; courses will continue on a regular basis so that new staff have the same opportunity.
- All CDF courses require 120 hours of instruction using the standard curriculum of the National Career Development Association, with a blend of face-to-face classroom, online learning, and independent project work.
- Each student is required to attend 2 face-to-face days at the beginning of the course and 1 at the end. All other work can be done from their duty station or home.
- Each center will have the option to register staff for the most convenient regional sessions. Other staff can register/attend the next scheduled sessions in 2017, which may be in varied locations.
- Locations of the face-to-face days will be regional and will vary based on venue availability and staffing demographics. We will publish all dates and locations as early as possible to ease the selection and registration process.

Course cost and responsibility for payment

- The fee for each student is $300, which includes instruction and materials (travel and lodging is not included). This fee is discounted from the full fee of $525 for "open enrollment" CDF courses (described below).
- The cost of course attendance is the responsibility of the Division of Workforce Solutions (DWS).
- Students who successfully complete the CDF training course may apply to the Center for Credentialing and Education (CCE) for the Global Career Development Facilitator (GCDF) credential. Attainment of this credential will not be required of DWS staff, nor will DWS pay the additional fee for this credential; staff will be made aware of the option to apply on their own. Each workforce board may set their own standards and practices regarding the GCDF credential.

Note: See the Training Center website for more details on the course content and the GCDF credential.

Selection and Registration: Instructions for RODs and Workforce Board Directors

1. When registration for a course is open, the Training Center will email course details including a special code for registration and a registration deadline. This code is unique to each session and only those with the code will be able to register, which reserves all seats for center staff.
2. To further our goal of offering the CDF course to an equitable number of staff from all NCWorks Career Centers across the state, each DWS Regional Operations Director and each Workforce Board Director will be asked to coordinate with their managers and supervisors to select staff to attend and taking office coverage into account. There is no need for staff who have already completed CDF to do so again.
3. When staff is selected, give them the special code for the specific course they plan to attend and have them register online (in TRAIN) by the registration deadline.
4. If a staff member registers but is no longer employed prior to the session start date, a substitution is acceptable. Once the class has begun substitutions cannot be accepted.
5. When the class has begun, the Training Center will request an internal funds transfer for the expenses.

CDF Courses Offered with Open Enrollment

Additional option to sponsor staff in open enrollment courses

- The Training Center offers 4 CDF courses each year that are open to all workforce and career development professionals regardless of employer, with dates published on the Training Center website well in advance.
- Workforce Board Directors and RODs have the option to send a limited number of staff to these courses at the same low price as the closed enrollment courses.
- Each class has 35 seats, 12 of which will be available at the discounted rate for career center staff.
- These seats are filled on a "first come – first enrolled" basis.
- All face-to-face days take place at the Training Center in Raleigh and use the same curriculum as the closed enrollment courses.

Selection and Registration: Instructions for RODs and Workforce Board Directors (for staff sponsorship in open enrollment courses)

1. No seats are reserved in these open sessions, but will be registered on a "first come – first enrolled" basis. The earlier your staff register the more likely they are to get a seat.
2. Select the staff members you will sponsor and the dates of the course they will attend.
3. Email these names to the Training Center ncwtc@nccommerce.com to verify your intent to cover the fee.
4. Have the individual staff member register online (in TRAIN). There is no special code required for these open courses.
5. If a staff member registers but is no longer employed prior to the session start date, a substitution is acceptable. Once the class has begun substitutions cannot be accepted.
6. When the class has begun, the Training Center will request an internal funds transfer for the expenses.

CAREER DEVELOPMENT FACILITATOR

NC Works training center

2016 DATES

REGISTRATION OPENS ON JUNE 27
REGISTRATION DEADLINE AUG 1

Aug 10-11; Dec 7
NCWTC– Raleigh
(Coupon Code: Exclusive1)

Aug 23-24; Dec 13
McDowell Tech CC—Marion
(Coupon Code: Exclusive2)

Aug 31-Sept 1; Dec 15
Pitt CC—Greenville
(Coupon Code: Exclusive3)

2017 DATES*

REGISTRATION WILL BE ANNOUNCED SOON

Jan 18-19; May 9 (Wilmington)
Jan 26-27; May 16 (Raleigh)
Jan 31-Feb 1; May 18 (Concord)
Aug 9-10; Dec 6 (Raleigh)
Aug 15-16; Dec 12 (Rocky Mount)
Aug 22-23; Dec 14 (Asheville)

Career Development Facilitator

REGISTRATION INSTRUCTIONS ON PAGE 2.

Career Development Facilitator for NCWorks Career Center Staff coming soon!

Additional course description and details can be found online here. Be sure to check out the *Information Booklet* too.

This course is proudly sponsored by the Division of Workforce Solutions (DWS) in collaboration with the local Workforce Boards for NCWorks Career Center Staff.

For questions please contact Nona Stell, Training Specialist with the NCWorks Training Center at: nona.stell@nccommerce.com or (919) 814-0331.

LVS Lengel Vocational Services

Instructor: Beth Lengel, *Lengel Vocational Services*

TRAIN
training registration & information network

REGISTRATION INSTRUCTIONS

NEW STUDENT ACCOUNT

1. Go to www.ncworkforcetraining.com.
2. Click on ***New Users Click Here.***
3. Complete ALL profile information.
4. Enter Security Image Code, click ***Submit.***
5. A confirmation email with your User ID and password will be sent upon approval.
6. See below to enroll in a course.

RETURNING STUDENTS

1. Go to www.ncworkforcetraining.com.
2. Enter your User ID and Password, click ***Login.***
3. First time users will be prompted to set up a security question and answer.
4. Click ***Enroll in Courses/Events.***
5. Select your course, click **Enroll**, request special needs if applicable, enter the required coupon code and click ***Submit***.
6. You will receive an enrollment confirmation via email.

REGISTRATION:

You must register online prior to a workshop, training class, or other special event. Confirmation of registration, with details, dates, times and location will be emailed one week prior to the session.

NCWorks Training Center course offerings are open to all in the NC workforce system unless specified as a closed training for a targeted group.

NC Works training center

REGISTRATION GUIDELINES

TRAINING SESSION CANCELLATION: We reserve the right to cancel or postpone sessions based on insufficient registrations or other unforeseen circumstances.

CANCELLATIONS AND SUBSTITUTIONS: To cancel a registration or make a substitution, email ncwtc@nccommerce.com. Submit cancellations and substitutions in writing at least three weeks prior to the session (unless otherwise specified).

SPECIAL NEEDS: Please include special needs requests when you register online. We can only guarantee provisions for special needs when notified at least two weeks in advance of training.

LODGING: A list of convenient hotels is available at www.ncworkforcetraining.com/Lodging.aspx.

Equal Opportunity Employer Program.
Auxiliary aids and services available upon request to individuals with disabilities.

Do you have questions or need help with registration? Please contact Nona Stell, Training Specialist at 919-814-0399 or email nona.stell@nccommerce.com.

Workforce Solutions
COMMERCE

PAT McCRORY
Governor

JOHN E. SKVARLA III
Secretary

WILL COLLINS
Assistant Secretary

June 15, 2016

Dear Workforce Board Directors and Regional Operations Directors:

We are pleased to jointly announce the launch of an extensive training initiative that invests in the staff of our NCWorks Career Centers and provides them the opportunity to gain a strong professional foundation.

As you are aware, a comprehensive training needs survey was conducted in late fall of 2015 to identify the critical skills needed by front line and management staff at our NCWorks Career Centers. One of the primary recommendations stemming from the analysis of the surveys is the need for building the career guidance and career advising skills of center staff.

The work groups that had input into the project strongly recommended the Career Development Facilitator (CDF) training course as a potential vehicle for providing training in these skills. Beginning in August, a series of CDF courses available exclusively for center staff will begin. The cost of instruction and materials associated with this training will be the responsibility of the Division of Workforce Solutions, as a tangible demonstration of our commitment to excellence in service to the public. For details on the CDF course and the registration process, please see the attached "Statewide Plan for Career Development Facilitator Training."

If you have questions or concerns, please feel free to contact either of us or Gene Scott, Director, NCWorks Training Center at gene.scott@nccommerce.com or 919-814-0330. She and her staff are managing the project and will be in touch soon with detailed registration instructions and a calendar of dates and locations.

We feel certain that this staff development plan will increase the quality of services offered across the state in our career centers and are confident of your collective support.

Sincerely,

Catherine Moga Bryant
Deputy Assistant Secretary

Pat Sturdivant, Director
Capital Area Workforce Development Board

Triangle Regional
Career Pathways Collaborative

ATTACHMENT 5

ARTICULATION AND COORDINATION

List of Attachments:

1. CTE Manufacturing Pathways, course offerings
2. CTE Career Cluster for Manufacturing Pathways
3. Career Pathways Career Options
4. Granville County Schools Strategic Plan for Advanced Manufacturing Training
5. Vance County Schools Strategic Plan for Advanced Manufacturing Training

Manufacturing Pathway Plan

Vance County Schools

Cluster: Manufacturing

This Career Pathway allows students to plan, manage and perform the processing of materials into intermediate or final products. The pathway also includes related professional and technical support activities such as production planning, and control, maintenance and product engineering.

Pathway: Production

Student Name: _____

Grade: _____

School Name:

Students are strongly encouraged to participate in College and Career Promise options.

Academic

Grade	English Language Arts	Math	Science	Social Studies	Others
9	English I	Math I	Earth Science	World History	Health/PE
10	English II	Math II	Biology	American History I/II	
11	English III	Math III	Physical Science	Civics and Economics	
12	English IV	Math IV			
	Students planning to attend 4 year university should take two foreign languages--one being 2nd level				
	Electives--Students choose from CTE Foundation & Enhancement options below.				

Work Based Learning Experiences

Skills, USA
CTE Internships
Job Shadowing
Field Trips
Guest Speakers

CTE Preparation

Foundation

Requires Minimum of 4 Courses to Earn CTE Concentrator Status with at least 1 Course Being a Completer (Starred*) Course; Options: 4 Foundation Courses OR 3 Foundation Courses + 1 Enhancement Course

Foundational Course Options

Electronics I IM31	Introduction to Trades & Industrial Education IU10	
Electronics II M32	Strategic Marketing MU92	
Marketing MM51	CTE Advanced Studies CS95	
Entrepreneurship I ME11	Principles of Business & Finance BF10	

Enhancement

Students Can Opt to Replace One Foundation Course Above with an Enhancement Course

Microsoft Word & PowerPoint BM10	CTE Internship CS97
Microsoft Excel & Access BM20	
Drafting I I661	
Personal Finance BF05	
Multimedia & Webpage Design BD10	

College Credit Options

Career & College Promise Options (*CT, *CTE)

Electric Systems Technology Diploma D35130D0
Electronics Engineering Tech Certificate C40200C
Sustainability Technologies Certificate C40370C
Welding Technology Diploma D50420D

Community Service Activities

Possible Credentials

MS Office Specialist - Word	NC Career Readiness Certificate
MS Office Specialist - PP	OSHA Safety
CPR & First Aid	

*CT - College Transfer
*CTE - Career & Technical Education

Career Counseling

8th Grade
Exploring Career Decisions
ACT Explore
Career Counseling

9-12th Grade
ACT PLAN--10th grade
ACT College Readiness Assessment

Career Diploma Endorsement Requirements
CTE Concentrator Status
2.6 Unweighted GPA
Minimum of one industry credential

Continuing Education	Future of the Pathway
Electronic Engineering Technology Mechatronics Engineering Technology	http://www.amtonline.org/ExploreCareerPathways/SchoolsStudents/directory-universities-of-industrial-distribution.htm http://www.amtonline.org/AboutAMT/WhatisManufacturingTechnology/

Community College Options	University Options
To research community college programs related to Health Sciences access the web sites of each college for details. http://www.nccommunitycolleges.edu/about-us/main-campuses	East Carolina University North Carolina State University North Carolina A&T State University Western Carolina University
Catawba Valley Community College	
Central Carolina Community College	
Haywood Community College	
Mitchell Community College	
Vance Granville Community College	
Wake Technical Community College	
Piedmont Community College	

Careers Related to this Pathway

Visit http://www.cfnc.org for more information

Occupations Relating to This Pathway

Industrial Production Manager
Electronic Engineering Technician
Industrial Engineering Technician
Industrial Machinery Mechanic
Manufacturing Engineering Technologist
Welder
Wind Turbine Engineer

Pathways	CareerClusters™ PATHWAYS TO COLLEGE & CAREER READINESS Manufacturing Cluster Foundation Courses				Cluster Enhancement Courses
Production	7400/IU10 Introduction to Trade and Industrial Education	7621/IM21 Cabinetmaking I	7622/IM22 Cabinetmaking II * (1 credit)	7623/IM23 Cabinetmaking III (1 credit)	6145/CC45 Career Management 6414/BD10 Multimedia and Webpage Design 6417/BM10 Microsoft Word and PowerPoint ^ 6418/BM30 Microsoft SharePoint ^ 6419/BM20 Microsoft Excel and Access ^ 6831/AS31 Agricultural Mechanics I IM34 Electronics IV ^ 7921/IC61 Drafting I 8726/BF05 Personal Finance (BFIT, FACS, & MEE) 8596/CS96 CTE Apprenticeship 8597/CS97 CTE Internship OI00 IB Approaches to Learning SL ^
		7661/IM61 Welding Technology I	7662/IM62 Welding Technology II * (1 credit)	7663/IM63 Welding Technology III (1 credit)	
		7641/IM41 Metals Manufacturing Technology I	7642/IM42 Metals Manufacturing Technology II * (2 credits)	8595/CS95 CTE Advanced Studies	
Manufacturing Production Process Development	7621/IM21 Cabinetmaking I	8510/CS11 Project Management I	8511/CS12 Project Management II - Global	8513/CS14 Project Management III	
	7661/IM61 Welding Technology I				
	7641/IM41 Metals Manufacturing Technology I		8512/CS13 Project Management II - Technology		
	6621/MM51 Marketing ^	7035/FA31 Apparel and Textile Production I (FACS & MEE)	7036/FA32 Apparel and Textile Production II * (FACS & MEE)	8716/ME11 Entrepreneurship I ^ (BFIT & MEE)	
	6631/MI21 Fashion Merchandising (FACS & MEE)				
Maintenance, Installation, and Repair	8721/BF10 Principles of Business & Finance (BFIT & MEE)	7631/IM31 Electronics I ^	7632/IM32 Electronics II * ^	7633/IM33 Electronics III ^	
Career & College Promise	Approved Career & College Promise Career Technical Education Pathway				

Additional Pathways	Quality Assurance	Health, Safety & Environmental Assurance
	Logistics & Inventory Control	
Middle School Courses	6158/CC58 Exploring Career Decisions	6208/BU20 Exploring Business, Marketing, and Entrepreneurship
	6207/BU10 Computer Skills and Applications	8201 /TE01 Technology Design & Innovation

Advanced Manufacturing Career Pathway

Career Options	Training, Certificates & Degrees	Skills & Abilities
Industrial & Technology Manager Electro-Mechanical Technician PLC Programmer ($22-$45/HR)	Electrical Technology – Bachelors Industrial Systems – Bachelors Mechantronics – Associates/Bachelors	Critical Thinking Reading Comprehension Time Management Instructing & Managing
Industrial Systems Technician Process Improvement Technician Research Technician ($18-$28/HR)	Electrical Technology – Associates Industrial Systems – Associates Mechantronics	Communication Skills Leadership Skills Time Management Computer Skills
Production Supervisor Industrial Mechanic, Welders Biological Technician ($16-$25/HR)	AWS – American Welding Society PMMI – Packaging Machinery Manufacturers BioWorks, Siemens Level 1	Reading Comprehension Communication Skills Time Management Problem Solving
Production Technician Machinist, Equipment Operator Quality Inspector ($10-$18/HR)	Certified Production Technician OSHA, Forklift NCCER - Construction	Equipment Monitoring Geometry/Algebra Communication Skills Problem Solving
Entry-Level Production Maintenance, Installation & Repair Helpers & Trainees ($8-$10/HR)	High School Diploma High School Equivalency NCCRC, GLA – Basic Education	General Mathematics Communication Skills Time Management Problem Solving

Granville County Schools Strategic 4 Year Plan – Section 3c. – DEEMED INCOMPLETE BY NCDPI

Describe special relationships, such as partnerships with other providers, and with volunteers, customers and stakeholders, or customer and stakeholder groups:

3c. Must have 3 pathways uploaded here. Use the attachment button to add them. Call if you have questions!

a. Provide a narrative describing your district's Pathway Partnerships. Specify:

(6-1-16) VGCC began their new "Mechatronics" program at their south campus. In conjunction with our Governor's EWIF grant, we are expanding an engineering and advanced manufacturing focus at Granville Central High School. The new wing of the high school was opened and became operational in the 2015-2016 school year, and we will be ready to provide a steady pipeline of students from this school to VGCC coursework in Mechatronics.

GCPS CTE has worked with the Advanced Manufacturing Training Alliance Group (AMSTA) to develop the Advanced Manufacturing Production Process Development Pathway (http://advancedmanufacturingalliance.org). A project coordinator was hired to work with the partners (Franklin, Granville, Vance, Warren, and Vance Granville Community College to provide professional development for teachers and work-based learning experiences for students in Advanced Manufacturing. North Carolina Triangle Apprenticeship Program (NCTAP) has partnered with the four counties in providing plant tours for parents and students that are interested in pursuing careers in Advanced Manufacturing. This group has also participated in parent nights, community forums, and career fairs in each of the four counties (www.nctap.org). This past year, two students from GCPS were selected to matriculate into this apprenticeship program at Dill Air Supplies in Oxford. Next year, Revlon Inc in Oxford will open up three additional apprenticeship programs.

Granville County will finalize the Golden Leaf grant received by the AMSTA Partners one year late (6/30/17). This is due to a delay in the construction at GCHS. CTE funds will be allotted to sustain the equipment and materials provided by the Golden Leaf grant.

Granville County Schools (CTE) has also begun partnering with Kerr-Tar Workforce Development Board, Capital Area Workforce Development Board, Durham Workforce Development Board, central region community colleges, and several school districts in the central region to develop certified Career Pathways in Advanced Manufacturing, Health & Life Sciences, and Information Technology.

The goal of this partnership is to have the pathways fully developed for the fall of 2017 so that districts can use the information in conjunction with the registration process to provide career guidance information to students.

In addition, The Career and College Promise is the foundation for our partnership with Vance Granville Community College. Granville County Public Schools and Warren County Public Schools received a matching funds grant through the Coomunity College system to hire a shared NC Works College Coach. This position will serve both districts with a goal of increasing the access of CCP and VGCC to our students. The pathways of the CTE Career and College Promise program for the 2016-2017 school year with VGCC will be:

Administrative Assistant Certificate (C25370C)

Business Management Certificate (C25120M)

Carpentry Diploma (D35180)

Cosmetology Certificate (C55140)

Early Childhood General Education Certificate (C55220G)

Electrical System Technology Diploma (D35130D)

Electronics Engineering Technology Certificate (C40200)

Industrial Systems Technology Diploma (D50240D)

Infant/Toddler Care Certificate (C55290)

Manicuring/Nail Technology Certificate (C55400)

Medical Assisting Diploma (D45920)

Medical Transcription Specialist Certificate (C25310M)

Pharmacy Technology Diploma (D45940)

School-Age Care Certificate (C55450)

Sustainability Technologies Certificate (C40370)

Welding Technology Diploma (D50420)

b. Describe how career guidance and academic counseling will be provided to CTE students including linkages to future education and training opportunities. (F134(b)(11))

(6-1-16) In the 2016-2017 school year, the district will continue its second year employing CDC. This position has proven to be a valuable contribution to offering career guidance and academic counseling in every CTE classroom. CTE teachers know and understand the relationship of their curriculum to the world of work. Teaching and learning occur in the context of workforce development.

In addition, we are increasing the profile of our CTE internships. In the 2015-2016 school year, we AGAIN doubled the numbers of students participating in work-based experiential learning up to 225 students. We plan to increase by this same rate in the 2016-2017 year by continuing to leverage funding received from the Governor's Workforces Innovation grant.

c. Districts must offer no less than one program of study. Upload a 6 year program(s) of study that include(s) the following: Specify:

Secondary Coursework

Career and College Promise

Post-Secondary Coursework

Articulated Credit

Earned Credentials

Work Based Learning

(F134(b)(3)(A))

In Granville County Schools we offer programs of study in the following areas:

Business, Finance & Information Technology

Marketing

Health Sciences

Agriculture Education

Technology Education

Family & Consumer Sciences

Trade & Industry

Courses are not offered in every program area at every campus, although our district offers managed choice so students can pursue specific areas of interest and fulfill pathways of study within a particular program area. Also, these pathways can be extended by taking courses at Vance Granville Community College through the Career & College Promise Programs. Students can also earn articulated credit at the community college by performing well in certain CTE courses and their final exams. We also offer opportunities for students to earn industry recognized credentials in specific areas, and we are expanding opportunities for students to participate in internships at local business and industry that correlate to their areas of interest in the CTE programs of study.

d. Describe Business Partnerships and Advisory Councils. Specify:

(6-1-16) The school system's Career-Technical Director serves as a member of the Kerr-Tar Workforce Development Board and its Youth Council. Our CTE staff and school district support the Workforce Investment Act (WIA) by providing technical support, office space, and oversee this program. Jaynette Howard, program supervisor, maintains an office at J. F. Webb High School and participates actively in the meetings, audits, and other activities associated with WIA.

During the 2015-2016 school year, the Career-Technical Education Advisory Council met on November 14, 2016. The council is composed of approximately 35 community business, industry, service, and community leaders. We plan to meet again in the fall of 2016. The council and CTE personnel work together to provide support for both our students and local employers. The council's primary goals are: (1) become knowledgeable of our program offerings, (2) provide input in the development of our annual plans, (3) Promote CTE programs in the community and (4) seek community support for the CTE programs.

e. Provide a narrative describing the involvement of key customer groups (who directly use and evaluate CTE programs, services, activities, and products) and key stakeholder groups (who indirectly receive yet evaluate programs and services, and who exercise sanctions over the CTE system) in planning, implementation, and evaluation of the local CTE program. The groups asterisked below are required under Perkins IV. (F134(b)(5))

Students*

Teachers*

Business Advisors*

Special Populations Reps*

Labor*

Parents*

All of the above stakeholders are invited to participate in the CTE Advisory Council that meets at least once per year. The recommendations generated by the advisory Council are integrated into our local plan. In addition, a team of CTE teachers convened to help create the LPS strategies that are contained in this plan.

f. Describe the process that will be used to evaluate and continuously improve the performance of the local CTE program. (F134(b)(7))

(6-1-16) The CTE Advisory Council play an important role in considering the performance and goals of the program. Members of the council are asked to provide feedback and ideas for improvement, and these considerations are integrated into the local plan.

High and middle school principals, senior district leadership and the board of education all play a role in evaluating the program and set specific goals for each site. They also make regular recommendations or requests to improve the program's performance.

The faculty at each school has regular, monthly CTE department meetings. The department chair has regular updates with the program director CDC, and IMC, which provide information to district and building leaders as well.

4. CTE's size and location(s).

See individual school reports provided via PowerSchool

5. Describe professional development in the LEA including efforts to improve (i) the recruitment and retention of career and technical education teachers, faculty, and career guidance counselors including groups underrepresented in the teaching profession; and (ii) The transition of professionals to teaching from business and industry. (F134(b)(12)(A)(B))

(6-1-16) Recruiting and retaining qualified teachers is one of the main goals for the entire school system, especially in difficult to staff program areas of CTE like Health Sciences and Technology Education.

All new CTE teachers are supported through the districts New Teacher Orientation process, and are counseled by the CTE Director and IMC on how to satisfy any induction programs. We also use local CTE funds to cover any financial burdens to the teacher in this process (registration fees, travel, stipends, etc.) In addition, additional days of employment are offered to new teachers at the beginning of the school year to help prepare their classrooms, labs or teaching resources. The CTE Administrative Assistant also supports these teachers with inventory reviews and new purchasing.

CTE works closely with the Human Resources Department in order to develop and clarify lateral entry teacher requirements and licensure qualifications.

The CTE director with other department directors will continue to provide professional development for all CTE teachers in literacy, numeracy, and differentiation strategies for English Language Learners and disabilities identified by the Exceptional Education Department.

Vance County Schools Strategic 4 Year Plan – Section 3c. – APPRIVED BY LEA

3.Describe special relationships, such as partnerships with other providers, and with volunteers, customers and stakeholders, or customer and stakeholder groups:

a. Provide a narrative describing your district's Pathway Partnerships. Specify:

(4/8/2016) The three career pathways, which are in different levels of development, include Manufacturing Production Process Development (Manufacturing Cluster); Therapeutic Services and Diagnostic Services (Health Science Cluster) and Facility & Mobile Equipment Maintenance (Transportation, Distribution & Logistics Cluster). (10, 12, 27)

Manufacturing Production Process Development Pathway

The projected shortage of workers for the advanced manufacturing sector workforce in the region as well as in North Carolina justifies a need for this career pathway. Manufacturing careers vary and surveys show that manufacturing jobs in chemical, computer and electronics, food, metal and transportation equipment products are forecasted to make gains annually through 2016. Many of the jobs in demand require an Associate's degree or a high school diploma plus specialized skills certificates. (http://advancedmanufacturingalliance.org)

The Advanced Manufacturing Skills Training Alliance (AMSTA) supports the development of the this pathway. The AMSTA is the result of the four-county area being awarded a North Carolina Governor Education and Workforce Innovation Grant. It is a collaborative partnership that developed during the 2013-14 school year and remains active in gathering input from local industry partners, Vance-Granville Community College leaders, teachers and Career and Technical Education Directors. Representatives are from Vance, Granville, Franklin and Warren counties.

The partnership supports the alignment of programs specifically from high school to the community college to the advanced manufacturing industry. It provides paid internship opportunities for students as well as professional development opportunities in advanced manufacturing for CTE and Core teachers, Career Development Coordinator, Instructional Management Coordinator, CTE Director and guidance counselors. These experiences are designed to provide staff and students with first-hand information on career skills for the advanced manufacturing industry. (11, 28)

The AMSTA hired a project manager and the project manager has worked collaboratively with the IMC, teachers and industry leaders in placing students in paid internships. Six students have been placed and the goal is to increase internship opportunities in advanced manufacturing through building relationships with additional industry partners.

The AMSTA Project Manager will continue to makes presentations concerning local educational and workforce opportunities and work collaboratively with the CTE Director to access needs in the areas of business partnership opportunities and professional development for teachers. During the 2016-17 school year, the AMSTA Project Manager will work closely with the Career Development Coordinator on internship placements.

In June 2016, the AMSTA will sponsor a regional "Summer Cruisers" professional development for 25 middle and high school CTE and CORE curriculum teachers in each of the four counties (Franklin, Granville, Vance, Warren). The objective of the 3-day training is to expose teachers to job market trends, skillsets needed by students, contact persons and online resources. The teacher will also listen to panelists representing business and industry and the CTE Director will use PRC 014 funds to provide field trips to tour business and industry in the local and regional area. (5, 28)

Another grant which has been used to support the Advanced Manufacturing pathway is a two-year Golden Leaf Grant, totaling $100,000. This grant allowed for the purchase of advanced manufacturing training equipment which included tabletop training systems for:

Electrical wiring

Electrical motor controls

Logic controls

Variable frequency motor drives

Introductory computerized simulation activities

Additional tool kits will be purchased with PRC 017 funds to support the use of these pieces of training equipment. Vance Granville Community College is partnering with CTE Trades and Industrial Education teachers to provide professional development on the tabletop trainers. (5)

(4/8/2016) Teachers will use the equipment and computerized activities to help students learn to troubleshoot, use applied mathematics and create solutions to other STEM-related problems found in advanced manufacturing environments. The equipment is being integrated into the existing courses of Construction Technology, Introduction to Trades and Industrial Education and Technology Engineering and Design. (1)

An Advanced Manufacturing lab has been established at Northern Vance High School and Southern Vance High School to house the equipment and computer program. The Northern Vance High School lab is the result of the renovation of a carpentry lab and consists of a classroom area updated with a Smartboard, computers and tabletop trainers. It also includes a lab area to support advanced manufacturing as well as room to create a "makerspace" to support the Advanced Manufacturing pathway. A vacant classroom at Southern High School lab was used to create its lab. These Advanced Manufacturing labs will continue to be supported by continuing to purchase the online software using PRC 017 funds. (28) (7)

Newsletters, brochures and the Vance County Schools website will continue to be used to create an awareness of the opportunities available in the advanced manufacturing industry. Distribution of the information will continue to be done with the central office staff, school-level administrators and teachers in meetings, students with sessions conducted by the Career Development Coordinator, parents in Parent focus sessions and businesses and industries in advisory council sessions. (10, 11)

Vance Medical Academy (Health Science Pathway)

This pathway exposes students to medical careers with a specific focus on the nursing and pharmacy careers. Medical careers are among the fastest growing occupations in the Research Triangle Region and are included in the job projections through 2020. (NC State Employees' Career Transition Center, http://www.sectc.nc.gov/Portals/0/Documents/RTRP%20Top%20Indust%20and%20Occ%202010-2020%206-3-11.pdf) The Vance Medical Academy also helps to prepare students for 3 of the region's 11 "technology-based clusters". These clusters include advanced medical care, biological agents and infectious diseases and pharmaceuticals. (http://www.researchtriangle.org/clusters)

The Vance Medical Academy (VMA) is in its third year of existence and is located on the campus of Southern Vance High School. The Vance Medical Academy instructors, CTE Director and Career Development Coordinator recruit students from the two middle schools by making presentations to 8th grade students about the VMA. Presentations will also be

made to 7th graders during the 2016-17 school year. Recruitment of nontraditional students will also continue to be a focus during recruitment. An application process is used to select students. (26)

The Vance Medical Academy begins with a cohort of ninth grade students and they follow the Health Science Pathway from 9th grade to their senior year. This approach allows students to be exposed to a simulated work environment by requiring uniforms to be worn beginning in the ninth grade year; providing college credit opportunities through the Career & College Promise Program during the junior and senior year and providing clinical experiences during the senior year. Students can currently earn certifications in Cardiopulmonary Resuscitation (CPR/First Aid) and work toward being ready to take the Certified Nursing Assistant 1 (CNA 1)exam. They can also earn a Career Readiness certificate as a CTE Concentrator through WorkKeys as well as OSHA Safety certification. During the 2016-17 school, the opportunity for certification in Pharmacy Technician will also be available. (18)

Students in the Vance Medical Academy receive their skills training in a separate room on campus designed as a simulated nursing setting. The lab is equipped with 4 beds, 2 bedside tables, ceiling curtains for each bed setting, wheel chairs and other instructional aids to enhance training. PRC 014 and 017 funds will be used to purchase 2 additional bedside tables and other instructional supplies. (7)

A partnership is established with the local rest homes and Vance-Granville Community College. Additional partnerships with the Maria Parham Medical Center and day care centers are included in the focus for the 2016-17 school year.

Automotive Services (Facility & Mobile Equipment Maintenance Pathway)

This partnership focuses on careers in the automotive industry. The automotive industry continues to be one of the key industries in the Research Triangle area. (http://www.thrivenc.com/automotive)

The Automotive Program is located on the campus of Northern Vance High School and follows the guidelines of the National Automotive Technicians Education Foundation (NATEF). This partnership continues to grow and is composed of partnerships with Vance Granville Community College and local car dealerships. These partners participate in the Fall and Spring advisory committee meetings. The donation of an additional vehicle has enhanced practice opportunities for the students. The enrollment of the courses in this pathway continues to increase and efforts are being made to expand automotive business partnerships, continue the partnership with Vance-Granville Community College, establish job shadowing and/or student internship opportunities with the local car dealerships and organize a Skills, USA student organization. (27)

b. Describe how career guidance and academic counseling will be provided to CTE students including linkages to future education and training opportunities. (F134(b)(11))

(4/14/2016) The addition of a Career Development Coordinator will allow for specific objectives to be accomplished at the middle schools and high schools. The dates in parenthesis indicate the implementation dates. These include:

1. Collaboration with teachers and counselors at the middle school to organize and implement student-centered activities during the "Students at Work" week statewide project. (Spring 2017)

2. Partnering with counselors at the middle school to organize a "Career Center" which includes online resources, supplemental career booklets and brochures. (Fall 2016)

3. Organization of procedures and a systematic process for students to take online career interest inventories for use in career guidance, high school course selection, career pathway selections and parent conferences. (Spring 2016)

4. Collaboration with the high school's College Advisor, who represents the UNC College Advising Corp, in providing training opportunities on resumes, applications and interview techniques for students. (Fall 2016)

5. Collaboration with counselors, teachers and business and industry leaders to organize an annual career fair at the high school and middle schools. (Fall 2016, Spring 2017)

6. Development of a guest speaker list and field trip experiences by career pathways for distribution to teachers. (Fall 2016)

In addition, the district will sponsor and/or support the following activities to provide students exposure to career and college options as well as academic counseling and career guidance:

1. Parent information sessions during the summer, after School and in Parent Night sessions

2. Field trips to businesses, industries, educational institutions

3. Field trips to specialized curriculum program activities sponsored by Vance Granville Community College such as "Advanced Manufacturing Day" and curriculum programs

4. Resource Fair sponsored by NC Cooperative Extension and Vance County Schools CTE Department and includes business, industry and educational resources

5. College Day activities and College Readiness Night

6. Individualized students counseling sessions

7. Career & Technical student organization local activities and regional/state competitive events

8. Use an online Google doc survey for stakeholders to evaluate the CTE Program annually. During the 2017 school year, the survey will be done in September 2016 and in April 2017. (6)

These activities are planned at the school level, community college level and district/regional level. They are supported by the CTE teachers, CTE Director, Instructional Management Coordinator, Career Development Coordinator, Superintendent, Central Office curriculum staff, guidance counselors, administrators, students, parents, school board members, local businesses and community leaders.

c. Districts must offer no less than one program of study. Upload a 6 year program(s) of study that include(s) the following: Specify:

Secondary Coursework

Career and College Promise

Post-Secondary Coursework

Articulated Credit

Earned Credentials

Work Based Learning

(F134(b)(3)(A))

(4/1/2016) Health Science Cluster

Two career pathways for the Health Science cluster include Therapeutic Services and Diagnostic Services. These pathways are implemented through the establishment of the Vance Medical Academy (VMA). The VMA consists of two health sciences teachers and has three cohorts of students with 37 students in the first cohort, 25 students in the second cohort and 30 students in the third cohort. The health science teachers and core teachers will collaborate on specific lessons to incorporate health sciences and core curriculums concepts. Teachers guide students in community-based projects such as the Red Cross Blood Drive and blood pressure checks.

A district level brochure includes the high school and college courses offered for the two pathways. Information sessions are conducted at the district level to share the information with the Superintendent, district level curriculum staff, principals, teachers, school board members, guidance counselors and support staff such as data managers. Information is also shared with parents and students in student and parent sessions at the middle schools. The Health Science advisory committee is being organized and scheduled to meet during the Spring of 2016.

Transportation, Distribution and Logistics Cluster

The career pathway for the Transportation, Distribution and Logistic Cluster is Facility and Mobile Equipment Maintenance. This career pathway is supported by the Automotive Services Program which is housed at Northern Vance High School. Collaboration between the instructor and local automotive businesses provide opportunity to discuss internship options for students. The pathway development also includes related programs at Vance Granville Community College. (27)

A brochure has been developed describing the high school and community college courses for this pathway. Information sessions will continue to include all stakeholders (Superintendent, curriculum staff, teachers, principals, counselors, data managers, parents and students). The information is also published on the Vance County Schools webpage.

Representatives from local automobile dealerships and Vance-Granville Community College are members of the Advisory Committee.

(4/1/2016) Manufacturing Cluster

The career pathway for the Manufacturing Cluster is Production and Process Development. Courses in the Trades and Industrial Education Program include courses which support this career pathway. A partnership with the Advanced Manufacturing Skills Training Alliance (AMSTA) has enhanced student opportunities for this career pathway. The AMSTA was established during the 2013-14 school year and is comprised of four CTE programs in Vance, Granville, Franklin and Warren counties, Vance-Granville Community College and local industry representatives. During the 2014-15 school year, a AMSTA Project Manager was hired to execute the various components of the Grant, which includes student opportunities for job shadowing, internships and/or other work-based learning during the school year and summer. During the 2015-16 school year, students have been placed in internships with two local businesses. Representatives representing North Carolina Triangle Association (NCTAP)served as guest speakers to explain the internship opportunities available to students.

This pathway is in the early stage of development. The next steps will include:

1. Continue to promote activities to publicize the benefits of skills acquired through the pathway with all stakeholders.

2. Continue partnership with the Vance Granville Community College Electricity/Electronic Department to provide professional development for the Trades & Industrial Education teachers on the tabletop trainers

3. Presentations of community college program offering and tours of the facilities and programs (Vance Granville Community College, Wake Technical Community College) (19)

One third of the staff is new to the district. There will be continued professional development to teach staff about developing effective business and community partnerships. The purpose and benefits of advisory committee establishment will also be shared.

Excerpts of the pathways are included below.

Current Attachments

d. Describe Business Partnerships and Advisory Councils. Specify:

(4/1/2016) Three advisory councils will serve on sub-committees for special pathways. Advisory council members will evaluate the LEA annual evaluation of CTE programs. (6)

The pathways include Automotive Services, Health Sciences and Manufacturing. All three are in different phases of development.

The advisory council for Automotive Services will continue to meet twice a year in the classroom and tour the lab setting. The teacher develop the agenda in collaboration with the CTE Director and member representatives. The agenda includes updates of the program, a tour of the facilities, updates from industry and recommendations.

The Health Sciences advisory council will hold its meeting in the Spring 2016. Plans are to share information about the organization, structure and courses for the Vance Medical Academy, the career pathway and future certification and internship opportunities for students.

Two partnerships exist for the Advanced Manufacturing pathway and include representatives from Vance Granville Community and the Advanced Manufacturing Skills Alliance. Local business partners are being recruited for this pathway.

CTE funds are used to continue to update and publish brochures for all career pathways.

(4/1/2016) An overview of the collaborative efforts for and with the business partnerships include:

1. Vance Granville Community College

a. Continued professional development with CTE teachers and guidance counselors will be done to review the courses that are included in the articulation agreement and related curriculum areas. This professional development will assist them in providing information to students on making connections from high school to postsecondary education. Vance-Granville Community College representatives will continue to be invited to sessions to provide guidance and evaluation in the following manner:

a. The community college's Director of Joint High School Programs will provides information during Parent sessions and teacher sessions to help staff, students and parents understand the requirements, benefits and enrollment procedures for the Career and College Promise Program.

b. High school teachers and the CTE Director will continue to serve on advisory committees for the curriculum areas of the community college and community college representatives will be requested to serve on the CTE advisory committees.

c. The Program Head/Instructor of the college's Automotive Technology Systems curriculum will continue to be requested to assist with evaluating the high school's transportation career pathway and auto shop tools and equipment.

d. The college's Research and Grant Coordinator, Director of Endowments, Mechatronics and Engineering Program instructor and business representatives will provide guidance on developing the foundation for a strong advanced manufacturing career pathway. Previously, they have collaborated with the four-county CTE directors to secure grant funding for advanced manufacturing lab simulation equipment and student internships. The result of this partnership has resulted in the establishment of the Advanced Manufacturing Skills Training Alliance. This partnership has also resulted in being able to receive two grants to support the CTE programs. The two-year Golden Leaf Grant ($100,000) was used to purchase advanced manufacturing simulation equipment to provide students with the foundational skills that they need to enter STEM (Science, Technology, Engineering and Mathematics)and advanced manufacturing careers. The five-year Governor's Workforce Innovative Grant continues to help with work-based learning opportunities for students.

2. Local Fire Departments

The Fire/Public Safety Academy opened in the 2014 Spring semester. Local fire departments continue to provide support and guidance for the Academy. Helmets and fire fighter gear were donated in the Spring 2014 and a fire truck was donated in the Spring 2015. CTE funds are used to hire a Fire/Public Safety teacher.

3. Vance County Cooperative Extension Service

a. The third annual resource fair was held March 2016 in partnership with the Vance County Cooperative Extension Service and the CTE Department. The CTE teachers and students participate by creating table displays which feature products, demonstrations, pictures, PowerPoints presentations and brochures. The CTE director serves on the Cooperative Extension Advisory Committee and the members of the Advisory Committee are also resources for the CTE Program areas by serving as guest speakers and/or providing information related to the curriculum areas. This partnership will continue.

b. The Cooperative Extension Service will continue to partner with the Agriculture Education teacher to provide student workshops and enhance the Agriculture curriculum.

4. Kerr Tar Regional Council of Governments

The CTE Director served on the committee to assist with organizing the first STEM Summit at Vance-Granville Community College (March 2015). The Summit included local business and industry members, representatives from the school STEM programs, CTE, Early College High School, middle school, members of the city council, community college curriculum representatives and WIA (Workforce Investment Act) representatives. The goal of the Summit was to bring awareness to the need for STEM initiatives from all stakeholders and to provide a foundation for the development of policies relating to STEM issues. This partnership will continue.

e. Provide a narrative describing the involvement of key customer groups (who directly use and evaluate CTE programs, services, activities, and products) and key stakeholder groups (who indirectly receive yet evaluate programs and services, and who exercise sanctions over the CTE system) in planning, implementation, and evaluation of the local CTE program. The groups asterisked below are required under Perkins IV. (F134(b)(5))

Students*

Teachers*

Business Advisors*

Special Populations Reps*

Labor*

Parents*

Students

Follow up data is collected from concentrators to evaluate program areas. This information is available through the Local Plan at http://ctelps.dpi.state.nc.us/ctelps.nsf.

An application process continues to be used for the Vance Medical Academy and Fire/Public Safety Academy. They are in various stages of development. Evaluation of the Vance Medical Academy will be conducted during the Spring semester 2016. Information gathered from the follow-up surveys and evaluation of this career academy will be used to make improvements in course offerings, support activities and recruitment strategies.

(4/14/2016) Business Advisors

The business advisors include advisory council members for career pathways which represent Automotive Services, Health Sciences and Advanced Manufacturing. Organizational structure, description of staff, facilities and equipment and academic data will be shared with the representatives. Opportunities for the advisory members to provide input and guidance based on industry standards will continue to be provided. The business partnerships include local automotive dealership representatives, Kindred Rehabilitation and Nursing Home and the Advanced Manufacturing Skills Alliance.

The local automotive dealership representatives provide guidance on best practices to establish internship opportunities for students. Plans are to work toward placement of students during the summer so they will be able to get a year of experience before taking any assessments which lead to credentials.

Kindred Rehabilitation and Nursing Home serves as a strong partner for the Vance Medical Academy. The director of the facility allows students enrolled in the Nursing Fundamentals course to practice their required skills in a clinical setting. The director also provides guidance for the teachers so students meet the facility's requirements for criminal background checks and immunizations. A representative of the facility serves on the advisory council to ensure that the Health Services program is aligned with the requirements and needs of the industry and how plans can be made for improvement and expansion.

The Advanced Manufacturing Skills Training Alliance has helped to strengthened the internship opportunities locally. Six students have been placed in paid internships related to Advanced Manufacturing. The two local business/industry include Jerry's Artarama and Holland Industries. In addition to the Career Development Coordinator, teachers, and counselors will be recruited to assist in promoting internship opportunities.

Labor

In its January 24, 2014 press release, the NC Economic Development Board recommended in its Strategic Plan that Career and Technical Education Programs should be enhanced with a focus on STEM training for industry clusters such as manufacturing, Information Technology, Health Sciences and Agribusiness (http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=118747).

The Vance County CTE programs are organized to support this STEM focus as well four of the five major industries in North Carolina which include Biotechnology, Energy, Financial Services and Information and Communications Technology. (http://www.thrivenc.com/keyindustries/overviewIndustries)

In addition, the Research Triangle Region's labor market projections include the need for 11 "technology-rich clusters". These clusters include 1)Advanced Medical Care, 2)Agricultural Biotechnology, 3)Analytical Instrumentation, 4)Biological Agents and Infectious Diseases, 5)Cleantech, 6)Defense Technologies, 7)Informatics, 8)Interactive Gaming and e-learning, 9)Nanoscale Technologies, 10) Pervasive Computing and 11) Pharmaceuticals. (http://www.researchtriangle.org/#clusters)

Business and industries representing these clusters will benefit from the skillsets that students receive through course offerings and credentials.

Advisory council members not only help to ensure that our plans are aligned with the local and regional economic development needs but provide them the opportunity to serve as workplace contacts as guest speakers, tours and professional development providers.

Teachers

Teachers provide feedback to the CTE Director, Instructional Management Coordinator and Career Development Coordinator by identifying strategies for improving academic and technical skills in the Program Areas. They respond to questions regarding testing procedures and the test administration system and list instructional and professional development needs.

Teachers participate in professional learning communities PLC), serve as teacher leaders and trainers and publicize their activities through the CTE Newsletter (published bi-weekly), twitter, district newsletter ("Lamplighter") local paper.

Instructional sessions will be held during school opening, on the district's early release/staff development days and incorporated into monthly CTE PLCs during the 2016-17 school year.

Special Population Representatives

The CTE Director works closely with the Exceptional Children's Director, Transition Specialist and Job Coaches to coordinate meeting the academic needs and transition needs of exceptional children. The IMC collaborates with the

Exceptional Children school-base chairpersons to ensure that CTE teachers implement the modifications required by the students' Individual Education Plans (IEPs). The IMC also works closely with the middle and high school testing coordinators to organize an appropriate testing schedule based on the students' IEPs.

The Exceptional Children teachers, Instructional Management Coordinator (IMC)and CTE teachers collaborate to organize classroom environments that will maximize learning opportunities for Special Population students. Teacher identify unsuccessful students at interim periods and collaborate with other teachers and the IMC to develop strategies for the success of the students.

The IMC, Career Development Coordinator and CTE Director will continue to provide "Question and Answer" sessions for school-level administrators, guidance counselors and exceptional children staff to assist with guidance for course selection, credentials, scheduling and identification of appropriate career pathways.

Parents

Parents have the opportunity to participate in "Question & Answer sessions for the Vance Medical Academy, Fire/Public Safety Academy, school level "Open House" and career academy recruitment student recruitment sessions. Parents of students in career academies will be requested to respond to a end-of-year survey to determine their level of satisfaction and collect their ideas for areas of needed improvements.

f. Describe the process that will be used to evaluate and continuously improve the performance of the local CTE program. (F134(b)(7))

(4/14/2016) Processes and procedures for continuous improvement of the CTE program include the following:

1. The CTE Director will use the data in the Local Plan to share the state targets (by program areas) with teachers, the Central Office staff and curriculum committee of the School Board. Strategies for student growth will be developed based on the available data.

2. The Instructional Management Coordinator (IMC) will assist teachers with developing interim and summative assessments which are cumulative and with developing summative reports. Teachers will interpret the assessment results to students and parents and place the students' grades online in PowerSchool for parents to access.

3. The CTE Director will provide written information on regional and state labor market trends for the teachers, principals, superintendent, assistant superintendents, curriculum directors and guidance counselors so that they are aware of the career pathways that need to be supported by the Program Areas. The CTE Director, IMC and CDC will work closely with the Maintenance Department and Technology Department to ensure that facilities are appropriate in meeting the guidelines needed to update and create spaces for classrooms and lab settings. (7)

4. Major improvements during the 2015-16 school year include:

a) Update of the Culinary Arts lab at Northern Vance High School (7)

b) Renovation of the carpentry lab and carpentry classroom at Northern Vance High School to transform them into the Advanced manufacturing lab (Collaborative effort with the district)

c) Opening of the Advanced Manufacturing labs at Northern Vance and Southern Vance high schools for use

d) Hiring a Career Development Coordinator

e) Placement of 6 students in paid internships for advanced manufacturing industries

f) Providing support of the Agriculture teacher with the hydroponics project

g) Providing support of building a mobile training structure for CERT training in the Fire/Public Safety Academy

h) Continued update of the Nurse Fundamental on-campus skills lab for the Vance Medical Academy program

i) Utilization of the VirtualJobShadowing software in the high schools, cfnc.org website and "Exploring Careers" software in the middle schools to extend exposure to career development opportunities

j) Support the Pinning Ceremony for the Nursing Fundamental students through purchase of the CNA I test voucher. (8, 9, 29)

5. The CTE Director will use an online survey to send to CTE staff in evaluating the overall CTE Program. the survey will be completed by May 2016. (6)

Triangle Regional
Career Pathways Collaborative

ATTACHMENT 6

WORK-BASED LEARNING

List of Attachments:

1. Activities Supported within Region for Work-Based Learning

2. Department of Public Instruction—Work-Based Learning Activities

3. Work-Based Learning Survey

WORK-BASED LEARNING

Current work-based learning strategies in the Region include apprenticeship, cooperative education, mentorship, school-based enterprise, service learning, and job shadowing. Additionally, the budget for the Career Pathways project includes resources for further work-based learning though On-the-Job training and paid work experience opportunities as well.

SPNEG--Career Pathways—Kerr-Tar Workforce Development Board

SECTION IV. Implementation Grant

(Up to $150,000 per year)

Category	Description	Amount Requested YEAR 1	Amount Requested YEAR 2
Work-Based Learning	Funds to support On-the-Job Training and paid work experience positions associated with Certified Pathways. *(20 DWs at 3,800 @= 76,000)*	$76,000	$76,000

WORK-BASED LEARNING

Work-based learning (WBL) is an educational strategy that provides students with real-life work experiences where they can apply academic and technical skills and develop employability skills. The concept of work-based learning has been in practice for centuries and is an integral part of the Career and Technical Education system.
Work-based learning experiences occur in a work setting, typically at an employer's worksite. The work-based learning activities are coordinated with school-based activities in an attempt to show students the "why" of what they are learning. Work-based learning strategies provide career awareness, career exploration opportunities, career planning activities, and help students reach competencies such as positive work attitudes and employability skills. Educators are encouraged to research, refine, and use the information provided here to the ultimate benefit of students as they prepare for the world of work.
Work-based learning experiences can be categorized in three ways:

1. LENGTH OF TERM

The work-based learning experience may last from a few hours to hundreds of hours. Job shadowing is usually a half-day or a full day. At a large company, job shadowing could last for more than one day. Most forms of work-based learning last over 100 hours.

2. CONNECTION TO COURSEWORK

Work-based learning can be tied to a specific course using the cooperative method, or can be independent from specific coursework. In cooperative education, the work-based learning is tied directly to a specific course. Sometimes everyone in a specific class is engaged in a work-based learning experience at the same time. This allows the teacher to have the students connect what they are learning in the classroom with what they are learning in the workplace. Job shadowing, internships, mentorships, and service learning are often not tied to a specific course and would be considered independent work-based learning.

3. REMUNERATION

Work-based learning experiences may be paid or unpaid. Other than a paycheck, remuneration might include company discounts or scholarships. Cooperative education experiences are always paid employment.
The Department of Labor has strict regulations that must be followed when working in an unpaid position. US DOL Fact Sheet #71 discusses rational for unpaid internships.

TYPES OF WORK-BASED LEARNING

Work-based learning strategies include:

- Apprenticeship
- Business/Industry Field Trip
- Cooperative Education
- Entrepreneurial Experiences
- Internship
- Job Shadowing
- Mentorship
- School-Based Enterprise
- Service Learning

APPRENTICESHIP

Apprenticeship is a system of skilled occupational training that combines practical work experiences with related academic and technical instruction. An apprentice works on the job for an employer and is taught and supervised by

an experienced person in the chosen occupation. The preplanned, progressively challenging work-based learning experience usually extends two to four years.
The apprentice is periodically evaluated and granted wage increases for satisfactory progress. Upon completion of the work and the related instruction, the apprentice is considered "skilled and knowledgeable" and will receive certification as a "journeyman" in the field.
Apprenticeship standards--established by the NC Department of Commerce - Apprenticeship and Training Bureau--are the minimum standards acceptable for any program. Local program standards may vary depending on local needs and should be developed in conjunction with all participating stakeholders.

PRE-APPRENTICESHIP

The Apprenticeship and Training Bureau refers to all high school apprenticeships as *Pre-apprenticeships*. The term *Apprenticeship* used on these web pages encompasses both Apprentices and Pre-apprentices.
Any work completed by a high school student in a Pre-apprenticeship could transfer to a Registered Apprenticeship upon graduation from high school. A Pre-apprenticeship does not require the multi-year commitment that a Registered Apprenticeship requires.

BUSINESS/INDUSTRY FIELD-TRIP

RATIONALE FOR FIELD TRIPS

The field trip is one strategy for relating up-to-date information on new techniques in a selected field by observing practical application of that information. Students are provided the opportunity to gain knowledge of careers related to a specific subject area and to better understand the community in which they live. Field trips strengthen partnerships with business and industry and reinforce the fact that "what is being learned in school will be needed in the world of work."

SERVICE LEARNING

Service learning is a work-based learning strategy that combines community service with career and technical learning goals. Students provide volunteer service to public and non-profit agencies, as well as to civic, charitable, and governmental organizations in the local community. There are three types of service learning activities: indirect, direct, and advocacy. Who is served and how the service is rendered distinguish the different types.
Indirect service involves students working behind the scene. Students channel resources to the problem without working directly with a service recipient. Generally, indirect service projects are done by groups and promote teamwork and organization skills. Examples include collecting food for disadvantaged families or landscaping a public park.
Direct service activities require contact with the people being served. They teach students to take responsibility for their actions and provide immediate feedback in the process of service. Students learn that they can make a difference. Examples include reading to small children or working with senior citizens.
Advocacy requires students to use their voices and skills to help eliminate the causes of identified problems. Not only do students work to correct problems, they also make the public aware of problems. Students learn to present their concerns clearly and concisely and to propose feasible solutions. Examples include establishing health care for migrant families or increasing literacy among incarcerated youth.

RATIONALE FOR SERVICE LEARNING

Through service learning, students can make a difference in their communities, and by making a difference, they grow and learn. They learn best when they apply their knowledge to real tasks. Such application makes the knowledge more valuable and interesting. Service learning balances the student's need to learn with the recipient's need for service. Students benefit by acquiring skills and knowledge. They realize personal satisfaction and learn civic responsibility, while the community benefits by having a local need addressed.
Service learning promotes personal, social, and intellectual development, as well as civic responsibility and career exploration. Its focus on developing human service skills makes it unique from other work-based learning strategies.

SCHOOL CREDIT

Service learning, as a work-based learning experience, does not earn the student course credit. It might be possible to turn the service learning into an internship.

JOB SHADOWING

RATIONALE OF JOB SHADOWING

Shadowing develops an awareness of the educational and technical skills required for entry and advancement in a specific occupation. The student becomes familiar with the work-site environment and the job-related characteristics of the specific job or career. Shadowing provides students the opportunity to discuss areas of interest or concern with the employee in the "real world" occupation they are shadowing. By providing a relevant experience outside the classroom, employers are able to contribute to the education of youth and help prepare students for future career opportunities.

MENTORSHIP

RATIONALE FOR MENTORSHIP

A mentorship is a deliberate pairing of a more-skilled or experienced person with a lesser-skilled or inexperienced learner with the agreed upon goal of having the lesser-skilled learner (mentee) grow and develop specific occupational competencies. The individualized approach to teaching and learning affords a self-motivated learner opportunity to excel and to become proficient in many skills. The mentor, guided by the learner's teacher coordinator, follows an agreed upon training plan.

ENTREPRENEURIAL EXPERIENCES

NOTE :: Various file formats are used on this page that may require download. **If larger than 1mb**, it will take longer to download. For instructions or more information, please visit our download page.
Through an entrepreneurial work-based learning experience students apply classroom learning to organization and operation of a business as an entrepreneur. They assume all risks in expectation of gaining profit and/or further knowledge.
School credit CANNOT be earned for entrepreneurial experiences (State Board Policy, GCS-I-003, June 2000). It may be possible to turn the Entrepreneurial Experience into an Internship in order to receive course credit.
Entrepreneurship includes organizing, managing, and assuming the risk of a business or enterprise. In this type of work-based learning, the student owns and operates a small business.

RATIONALE OF ENTREPRENEURIAL EXPERIENCES

The ultimate outcome would be to increase the level of knowledge and proficiency in running a business and to provide an opportunity for potential profit. An entrepreneurial work-based experience should be a capstone experience for a student who has developed career and technical skills that he/she desires to use in a personal business venture. The student may have developed the business plan for their business in an entrepreneurship course. This entrepreneurial experience should complement the student's career objective.
The entrepreneurial experience must be planned and supervised by the school and an adult mentor so that the experience contributes to the student's career objective/major and employability. Written business plans showing the business to be developed and the training opportunities to be gained must be in place prior to the experience beginning and should be updated periodically.
The entrepreneurial experience may fulfill requirements for a senior exit/graduation project that is done to demonstrate how the student is applying the academic preparation for his/her future. Some career and technical student organizations (CTSO) allow students to gain recognition for entrepreneurial efforts. It may be a supervised occupational experience, or it may be an entrepreneurial effort that is reported within the guidelines of the CTSO.
The entrepreneurial experience may be short term by concentrating on one or a small number of learning competencies, or it may be a long-term experience that includes additional competencies that are learned over a period of a year or more.
The entrepreneurial experience should be planned so that there is adequate time for the effort and time to interact with a business mentor in order to maximize the benefits of the entrepreneurial experience. Some examples of entrepreneurial experiences in high schools include a gift boutique, a catering service, a placement project, a pet sitting service, lawn care service, a shirt silk-screening service, a productive enterprise project, and a personal shopper's service.
Entrepreneurship, where the student actually owns an enterprise, is a valuable work-based learning strategy. The student gains not only work-place skills, but develops an understanding of how to actually manage a small business enterprise as he/she assumes all of the risks and is responsible for all decisions.

CAPITAL AREA
WORKFORCE DEVELOPMENT

Introduction

On behalf of Capital Area Workforce Development Board (CAWD), thank you for your participation in this survey!

The following questions – which should not take more than 10 minutes to complete -- will ask about your company's interest in engaging in local work-based learning opportunities. Work-based learning refers to an instructional strategy that enhances a student's education and helps inform his or her career choice. This strategy for learning is represented by a continuum of activities, including - but not limited to - the following:

***Business Tours**
***Internships**
***Job Shadowing**
***Apprenticeships**
***Industry Speakers**

As an employer, the feedback you provide will be used to help you connect with and influence the development of several different talent populations locally (students, veterans, disconnected/at risk youth, and former offenders). Ultimately, CAWD will create a work-based learning guide to be used as a resource by educators and other talent pipeline providers to engage local employers in their work-based learning efforts.

Please note, the commentary and feedback you provide in this survey is non-binding and the terms of your engagement in work-based learning activities will be negotiated between your company and the appropriate talent pipeline provider(s).

If you have questions or need any additional information, please contact Kelly Maness at 919.856.5663 or by email at kelly.maness@wakegov.com.

CAPITAL AREA
WORKFORCE DEVELOPMENT

Questions

* 1. In the matrix provided below, please indicate any work-based learning activities your company is currently participating in or would like to participate in, and which talent pipelines you are most interested in working with. Mark all answers that apply.

	College students	High School Students	Middle School Students	Veterans	Disconnected Youth**	Former Offenders	Persons with Disabilities
Host business tour(s)	☐	☐	☐	☐	☐	☐	☐
Be a guest speaker	☐	☐	☐	☐	☐	☐	☐
Participate in a career fair	☐	☐	☐	☐	☐	☐	☐
Host job shadowing	☐	☐	☐	☐	☐	☐	☐
Be a career mentor	☐	☐	☐	☐	☐	☐	☐
Conduct mock interviews	☐	☐	☐	☐	☐	☐	☐
Provide internship(s)	☐	☐	☐	☐	☐	☐	☐
Participate in and hire students through a college or university's cooperative education (co-op) program	☐	☐	☐	☐	☐	☐	☐
Provide apprenticeship(s)	☐	☐	☐	☐	☐	☐	☐

Comments:

**Disconnected Youth: out of school/unemployed OR at-risk for dropping out of school

2. Does your company hire individuals for full-time permanent positions in which you employ on-the-job training to improve workplace performance for those that have skills gaps?

- ◯ Yes
- ◯ No

3. Capital Area Workforce Development Board is leading a Summer Youth Internship program and is currently looking for businesses that are interested in providing a paid summer internship or sponsoring youth. Youth will be provided a week-long pre-employment training and leadership program prior to the start of the internship. Training includes, but is not limited to, job readiness, career exploration and financial literacy.

Do you have an interest in sponsoring youth for this program and/or participating by providing a paid internship opportunities at your business?

- ◯ Yes, interested in sponsoring youth
- ◯ Yes, interested in providing paid internship opportunities to youth at my company
- ◯ Not at this time

4. Please share any additional work-based learning activities that your company is doing and/or interested in participating in that were NOT listed in the previous questions.

Examples include, but are not limited to:
*Participation in networking events with students/teachers/career development coordinators
*Participation on an Industry Advisory Council that will provide support to K-12 schools, community colleges, apprenticeship program coordinators, etc.
*Provide externship programs for teachers and counselors
*Other

5. Is your company interested in promoting your industry and/or key occupational opportunities? If so, please indicate how you are interested in partnering below:

- ◯ Will provide video clips
- ◯ Will provide industry/occupational data
- ◯ Will provide print materials
- ◯ Not interested at this time

* 6. Please provide your company's name and contact information for the appropriate human resources representative or manager that primarily coordinates hiring and work-based learning activities at your business:

Company Name	
Contact Name	
Contact Phone	
Contact Email	

7. Please provide a short overview (2-3 sentences) of your company, industry, and key occupations employed by your business in the Research Triangle:

CAPITAL AREA
WORKFORCE DEVELOPMENT

Thank You

Thanks again for your time and participation!

Over the coming months, we will be reviewing all employer survey responses and building the aforementioned work-based learning resource guide.

If we have any additional questions, we will contact you directly. Should you have any questions or need additional information from us, please contact Kelly Maness.

Kelly Maness
Business Engagement Manager
Capital Area Workforce Development Board
919.856.5663
kelly.maness@wakegov.com

Triangle Regional
Career Pathways Collaborative

ATTACHMENT 7

MULTIPLE POINTS OF ENTRY AND EXIT

List of Attachments:

1. Advanced Manufacturing Pathway Options—Flow Chart
2. Advanced Manufacturing Career Pathway (Options, Training and Skills)
3. Pathway Plan for Manufacturing from Public Schools
4. Career Center Flow, with multiple points of entry and exit

Advanced Manufacturing Pathway Options

High School → Non-Degree Training with Industry Credential → Associate Degree → Bachelors Degree → Masters Degree

High School Learner

Academic Focus before Graduation

- Vocational Training Pathways
  - Manufacturing Production Process Development
  - Quality Assurance
  - Production
  - Maintenance, Installation, & Repair

High School Equivalency/Adult High School

Soft Skills Needed

- Problem Solving Skills
- Time Management
- Stress Management
- Communication Skills
- Self-Awareness
- Self-Management
- Work Ethics

Continuing Education

Training Leading to an Industry Credential

- MSSC: CPT and CLT
- NCCER
- AWS
- Siemens
- PMMI
- GLA
- OSHA (10/40/Forklift)
- NCCRC
- Welding
- BioWork

Career Options

- Siemens Level I Operator
- Siemens - Other
- Instrumentation Technician
- Control Technician
- Production Supervisor
- Machinists
- Manufacturing Production Technicians
- Equipment Repair
- OSHA Specialist
- Metal Workers
- Welders
- Industrial Mechanics
- Quality Inspector
- Quality Process Analyst

Curriculum

College Options

- Mechatronics (A/B/M)
- Industrial Systems (A/B/M)
- Electrical Power Plant Technology (A/B/M)
- Electrical/Electronic Technology (A/B/M)
- Welding (A)
- Biological Technician (A/B/M)

Career Options

- Machinist
- Industrial Systems Technician
- Electrician/ Electronics Technician
- Electrical/ Electronics Maintenance Specialist
- Technical Service Provider
- Process Improvement Technician
- Engineering Technician
- Industrial and Technology Manager
- Research Technician
- Electro-Mechanical Technician
- Electrical Troubleshooter
- PLC programmer
- Operator - Non-nuclear fueled power facilities
- Welder

A= Associate of Applied Science Degree
B=Bachelor's Degree
M=Master's Degree

Advanced Manufacturing Career Pathway

Career Options	Training, Certificates & Degrees	Skills & Abilities
Industrial & Technology Manager Electro-Mechanical Technician PLC Programmer ($22-$45/HR)	Electrical Technology – Bachelors Industrial Systems – Bachelors Mechantronics – Associates/Bachelors	Critical Thinking Reading Comprehension Time Management Instructing & Managing
Industrial Systems Technician Process Improvement Technician Research Technician ($18-$28/HR)	Electrical Technology – Associates Industrial Systems – Associates Mechantronics	Communication Skills Leadership Skills Time Management Computer Skills
Production Supervisor Industrial Mechanic, Welders Biological Technician ($16-$25/HR)	AWS – American Welding Society PMMI – Packaging Machinery Manufacturers BioWorks, Siemens Level 1	Reading Comprehension Communication Skills Time Management Problem Solving
Production Technician Machinist, Equipment Operator Quality Inspector ($10-$18/HR)	Certified Production Technician OSHA, Forklift NCCER - Construction	Equipment Monitoring Geometry/Algebra Communication Skills Problem Solving
Entry-Level Production Maintenance, Installation & Repair Helpers & Trainees ($8-$10/HR)	High School Diploma High School Equivalency NCCRC, GLA – Basic Education	General Mathematics Communication Skills Time Management Problem Solving

Manufacturing Pathway Plan

Vance County Schools

Cluster: Manufacturing

This Career Pathway allows students to plan, manage and perform the processing of materials into intermediate or final products. The pathway also includes related professional and technical support activities such as production planning, and control, maintenance and product engineering.

Pathway: Production

Student Name: _____

Grade: _____

School Name:

Students are strongly encouraged to participate in College and Career Promise options.

Academic

Grade	English Language Arts	Math	Science	Social Studies	Others
9	English I	Math I	Earth Science	World History	Health/PE
10	English II	Math II	Biology	American History I/II	
11	English III	Math III	Physical Science	Civics and Economics	
12	English IV	Math IV			
	Students planning to attend 4 year university should take two foreign languages--one being 2nd level				
	Electives--Students choose from CTE Foundation & Enhancement options below.				

Work Based Learning Experiences

Skills, USA
CTE Internships
Job Shadowing
Field Trips
Guest Speakers

CTE Preparation

Foundation

Requires Minimum of 4 Courses to Earn CTE Concentrator Status with at least 1 Course Being a Completer (Starred*) Course; Options: 4 Foundation Courses OR 3 Foundation Courses + 1 Enhancement Course

Foundational Course Options

Electronics I IM31	Introduction to Trades & Industrial Education IU10	
Electronics II M32	Strategic Marketing MU92	
Marketing MM51	CTE Advanced Studies CS95	
Entrepreneurship I ME11	Principles of Business & Finance BF10	

Enhancement

Students Can Opt to Replace One Foundation Course Above with an Enhancement Course

Microsoft Word & PowerPoint BM10	CTE Internship CS97
Microsoft Excel & Access BM20	
Drafting I I661	
Personal Finance BF05	
Multimedia & Webpage Design BD10	

College Credit Options

Career & College Promise Options (*CT, *CTE)

Electric Systems Technology Diploma D35130D0
Electronics Engineering Tech Certificate C40200C
Sustainability Technologies Certificate C40370C
Welding Technology Diploma D50420D

Community Service Activities

Possible Credentials

MS Office Specialist - Word	NC Career Readiness Certificate
MS Office Specialist - PP	OSHA Safety
CPR & First Aid	

*CT - College Transfer
*CTE - Career & Technical Education

Career Counseling

8th Grade
Exploring Career Decisions
ACT Explore
Career Counseling

9-12th Grade
ACT PLAN--10th grade
ACT College Readiness Assessment

Career Diploma Endorsement Requirements
CTE Concentrator Status
2.6 Unweighted GPA
Minimum of one industry credential

Continuing Education	Future of the Pathway
Electronic Engineering Technology Mechatronics Engineering Technology	http://www.amtonline.org/ExploreCareerPathways/SchoolsStudents/directory-universities-of-industrial-distribution.htm http://www.amtonline.org/AboutAMT/WhatisManufacturingTechnology/

Community College Options	University Options
To research community college programs related to Health Sciences access the web sites of each college for details. http://www.nccommunitycolleges.edu/about-us/main-campuses	East Carolina University North Carolina State University North Carolina A&T State University Western Carolina University
Catawba Valley Community College	
Central Carolina Community College	
Haywood Community College	
Mitchell Community College	
Vance Granville Community College	
Wake Technical Community College	
Piedmont Community College	

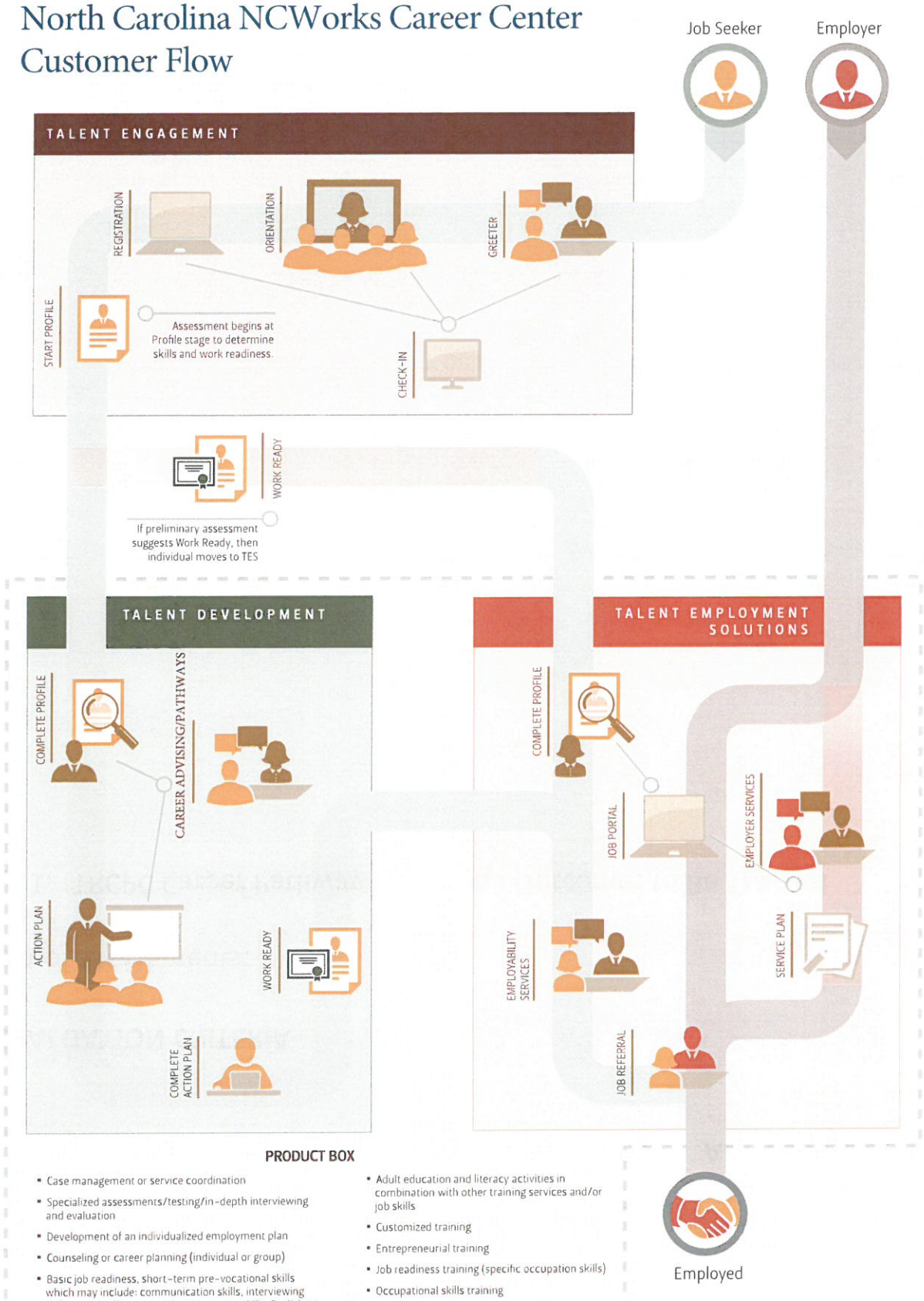
Careers Related to this Pathway

Visit http://www.cfnc.org for more information

Occupations Relating to This Pathway

Industrial Production Manager
Electronic Engineering Technician
Industrial Engineering Technician
Industrial Machinery Mechanic
Manufacturing Engineering Technologist
Welder
Wind Turbine Engineer

North Carolina NCWorks Career Center Customer Flow



PRODUCT BOX

- Case management or service coordination
- Specialized assessments/testing/in-depth interviewing and evaluation
- Development of an individualized employment plan
- Counseling or career planning (individual or group)
- Basic job readiness, short-term pre-vocational skills which may include: communication skills, interviewing skills, punctuality, personal maintenance skills, English as a Second Language (ESL), remediation and workplace literacy
- Literacy activities related to basic workforce readiness
- Adult basic education, GED preparation
- Job search assistance
- Work experience (paid or unpaid)
- Internships
- Referrals to training
- Adult education and literacy activities in combination with other training services and/or job skills
- Customized training
- Entrepreneurial training
- Job readiness training (specific occupation skills)
- Occupational skills training
- On-the-job training
- Programs that combine workplace training with related instruction
- Skill upgrading and retraining

NORTH CAROLINA ASSOCIATION OF workforce development boards

Triangle Regional
Career Pathways Collaborative

ATTACHMENT 8

EVALUATION CRITERIA

List of Attachments:

1. TRCPC Career Pathway Evaluation Outcomes to Be Tracked

TRCPC Career Pathway Evaluation Outcomes to Be Tracked – Draft

For Adults and Dislocated Workers

- Number receiving a credential in a targeted pathway industry (tracked in Futurework)
- Number employed in a targeted pathway industry (tracked in Futurework)
- Number receiving training in a targeted pathway industry (tracked in NCWorks Online)

For Post-Secondary Students

- Number of students completing training that will lead to a credential in a targeted pathway industry (tracked in NCCCS)
- Number of students in work-based learning opportunity in a targeted pathway industry (tracked manually)

For Secondary Students

- Number enrolled in CTE courses related to a targeted pathway industry (tracked in DPI system)
    - Track demographics to evaluate participation by non-traditional students (females in IT, for example).
- Number participating in CTE clusters in which targeted pathways are located (tracked in DPI system)
- Number participating in work-based learning (tracked manually)

Triangle Regional
Career Pathways Collaborative

ATTACHMENT 9

List of Attachments

1. NEG – Sector Partnership IT Career Pathway Implementation Budget

SPNEG--Career Pathways—Kerr-Tar Workforce Development Board

SECTION IV. Implementation Grant

(Up to $150,000 per year)

Category	Description	Amount Requested YEAR 1	Amount Requested YEAR 2
Work-Based Learning	Funds to support On-the-Job Training and paid work experience positions associated with Certified Pathways. *(20 DWs at 3,800 @= 76,000)*	$76,000	$76,000
Training Costs	Funds to support tuition for Pathways Training *(Formula funds will be used in addition to Pathway funds to support training costs)*	$16,000	$16,000
Career-Readiness Certification	Career Readiness Certifications for 35 dislocated workers at @ $36.00 each.	$1,260	$1,260
Staff Salaries	Funds to support dedicated staff responsible for recruiting dislocated workers, managing work experience sites, and other workplace learning activities, maintaining data regarding the customers.	$24,000	$24,000
Staff Fringe	Fringe benefits for designated staff (35%)	$8,400	$8,400
Travel		$1,200	$1,200
Contractor Costs	Funds to support a shared part-time staff among the 3 Boards, Capital Area, Kerr-Tar and Durham. Including travel.	$16,000	$16,000
Outreach/Marketing	Funds to support the promotion of the Career Pathways.	$2,140	$2,140
Materials and Supplies	Materials and supplies for implementation.	$2,000	$2,000
Career Awareness, Staff Development	Funds to support staff development activities, meetings, conference's, etc.	$3,000	$3,000
TOTAL		$150,000	$150,000
Admin Cost (5% of total)	***NOTE: A percentage to be shared with Capital Area as the Lead for the Region***	$7, 500	$7,500