



# New England Workforce Network Conference

*General Dynamics/Electric Boat:  
Educating future manufacturing employees through  
creative college and high school partnerships*

**March 16, 2018**

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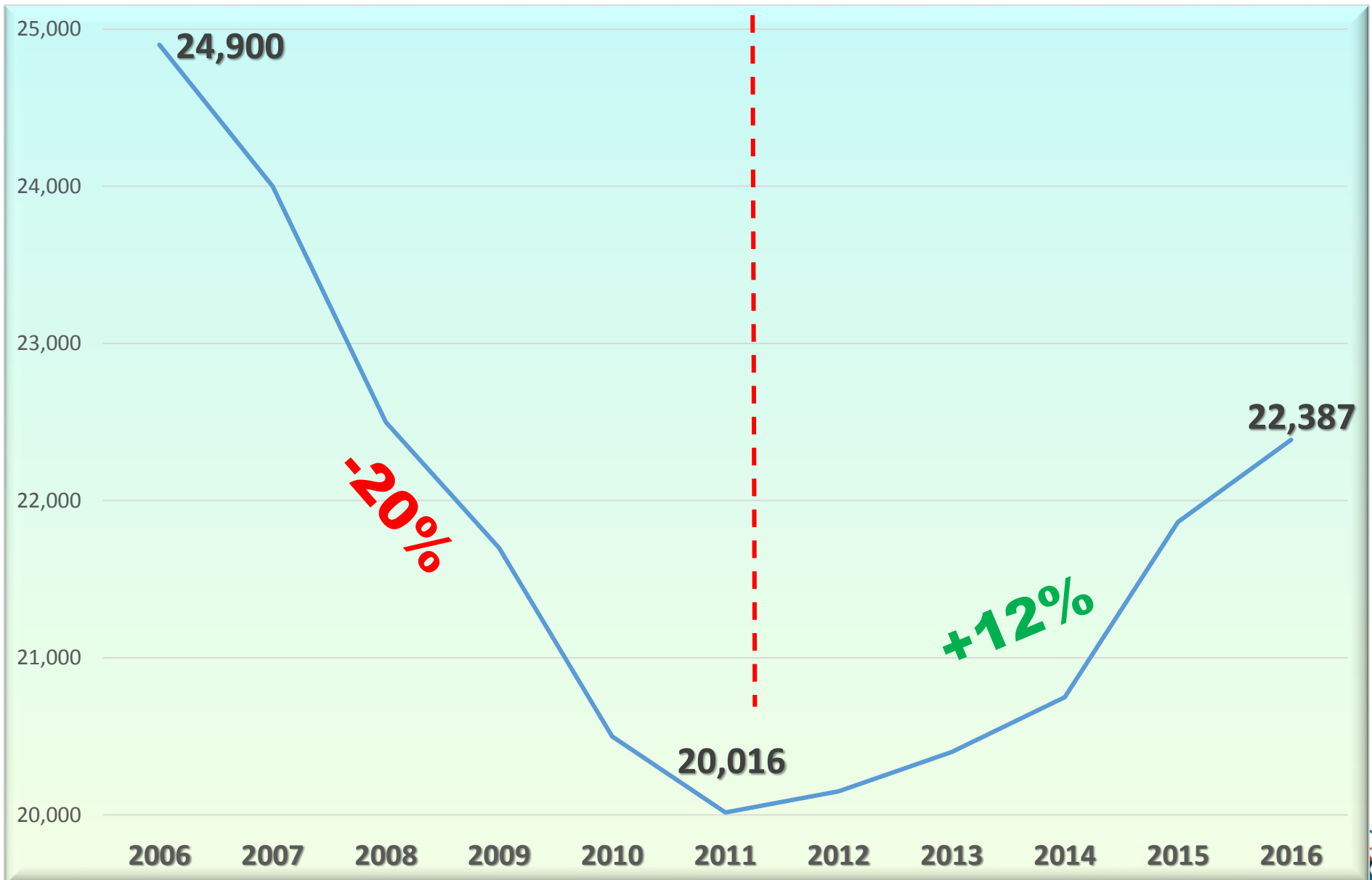


# Session Summary

- The Manufacturing Opportunity in Eastern CT
- The Strategy
- Workforce Challenges to Overcome
- Case Study #1: Eastern CT Manufacturing Pipeline Initiative (*MPI*)
- Case Study #2: CT-Early College Opportunities Program (*CT ECO*) & High School (*NFA*)
- Case Study #3: Apprenticeship Programs (*credit/non-credit*)



# The Manufacturing Opportunity In Eastern Connecticut



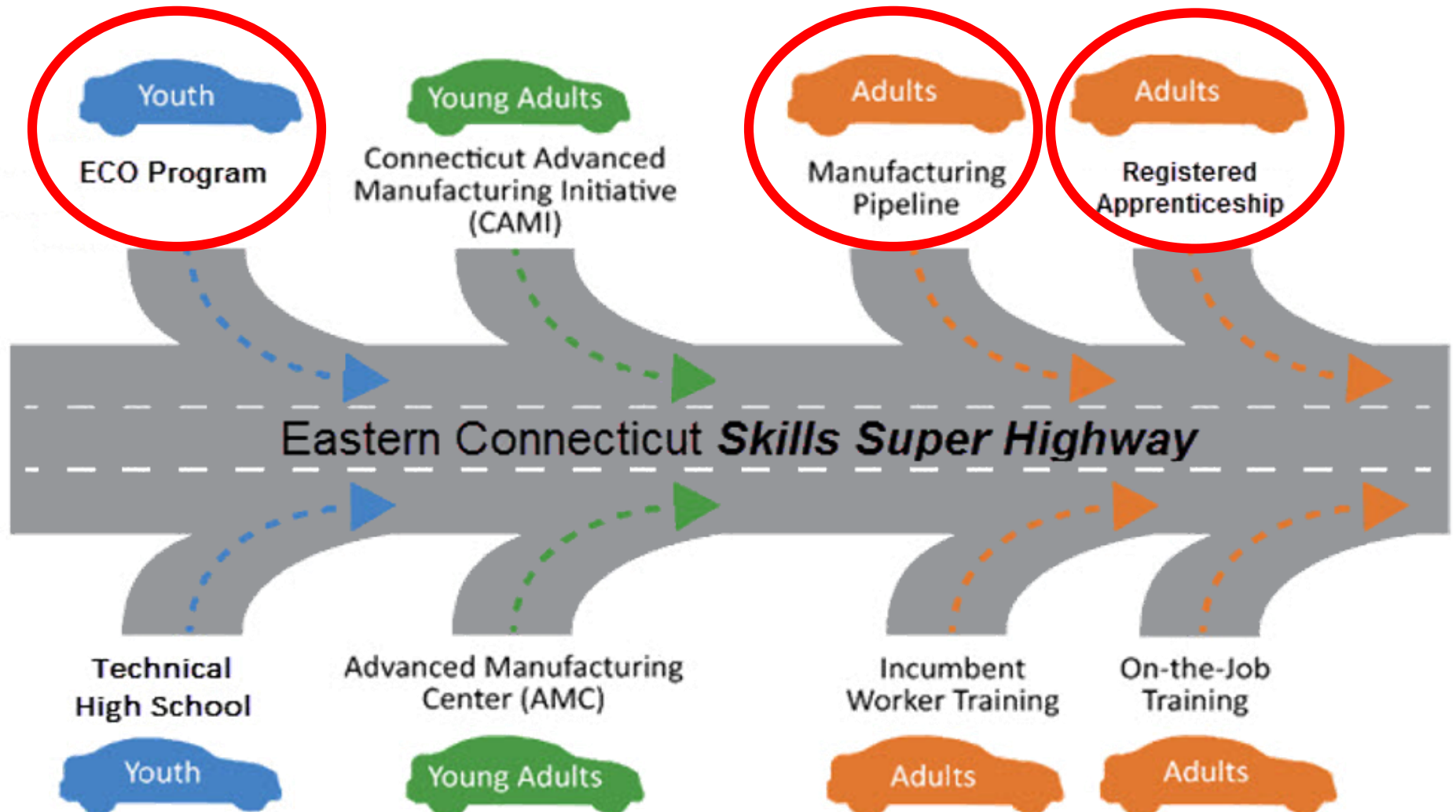
# Summary



- Strong Backlog
  - 13 ships under contract yet to be delivered, 11 under construction
  - VA Block V contract in early 2019 – 10 more submarines
- Positive Employment Outlook
  - 16,000 strong growing to over 18,000 (by 2030)
- Positioning for Growth
  - Developing our people, processes, facilities and supply base
- Build upon our Successful Community Partnership

# The Strategy

*Coordinate A Region Approach  
To Manufacturing Entry & Advancement*



## Case Study 1:

# The Eastern CT Manufacturing Pipeline



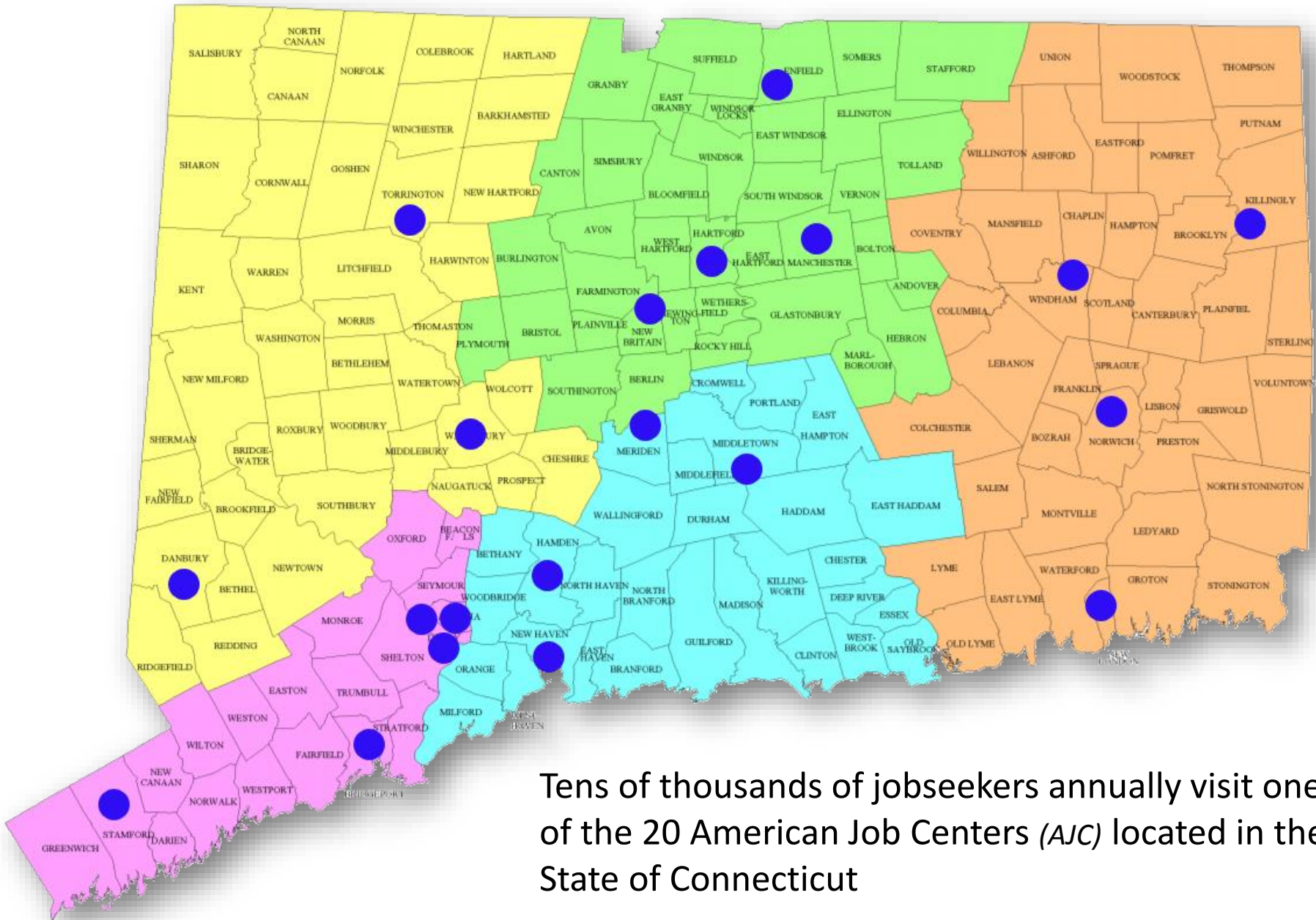
# Manufacturing Pipeline Concept

## *Build Sustainable Talent Supply*

- Connect employers to public workforce system/American Job Centers talent
- Ensure jobseekers have a baseline of skills
- Build transferrable skills for jobseekers in 7-10 week training classes (aligned to employer job-specific hiring needs)
- Construct an “*Ecosystem*” via a collaborative engagement between employers & other community partners (unions, colleges, high schools, workforce & economic development)
- Solicit Funding



# The “Public Workforce System”



Tens of thousands of jobseekers annually visit one of the 20 American Job Centers (AJC) located in the State of Connecticut





# The Workforce Challenge I

## Attracting Talent In A Competitive Labor Market

Hartford Courant

### Pratt & Whitney Will Fill 8,000 Jobs In Next Decade

By Shawn R. Beals

SEPTEMBER 16, 2016, 6:52 PM

**T**he president of Pratt & Whitney said Friday morning that the company is committed to Connecticut and is looking ahead to an expansion that is expected to include filling 8,000 jobs during the next decade.

"Right now we have the biggest backlog since World War II," said Robert Leduc. "We have about \$1 trillion of business in our backlog, and we've been able to do that through innovation."



January 10, 2017

### EB set for \$1.5B expansion

Navy asking about its capacity to build up to 4 subs at a time

THE WALL STREET JOURNAL

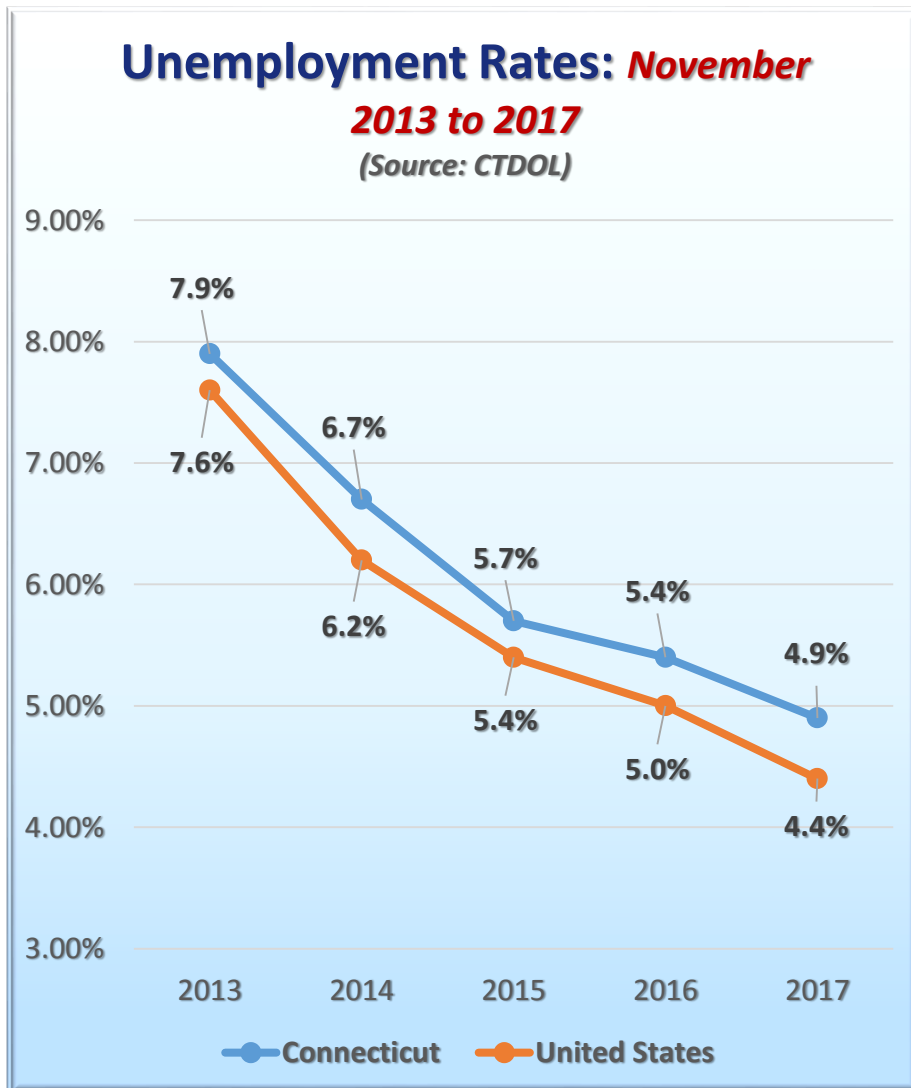
U.S. Edition FEBRUARY 2, 2017 Today's Paper

U.S.  
Skilled Workers Are Scarce in Tight Labor Market



# The Workforce Challenge II

## Workforce Supply & Demand



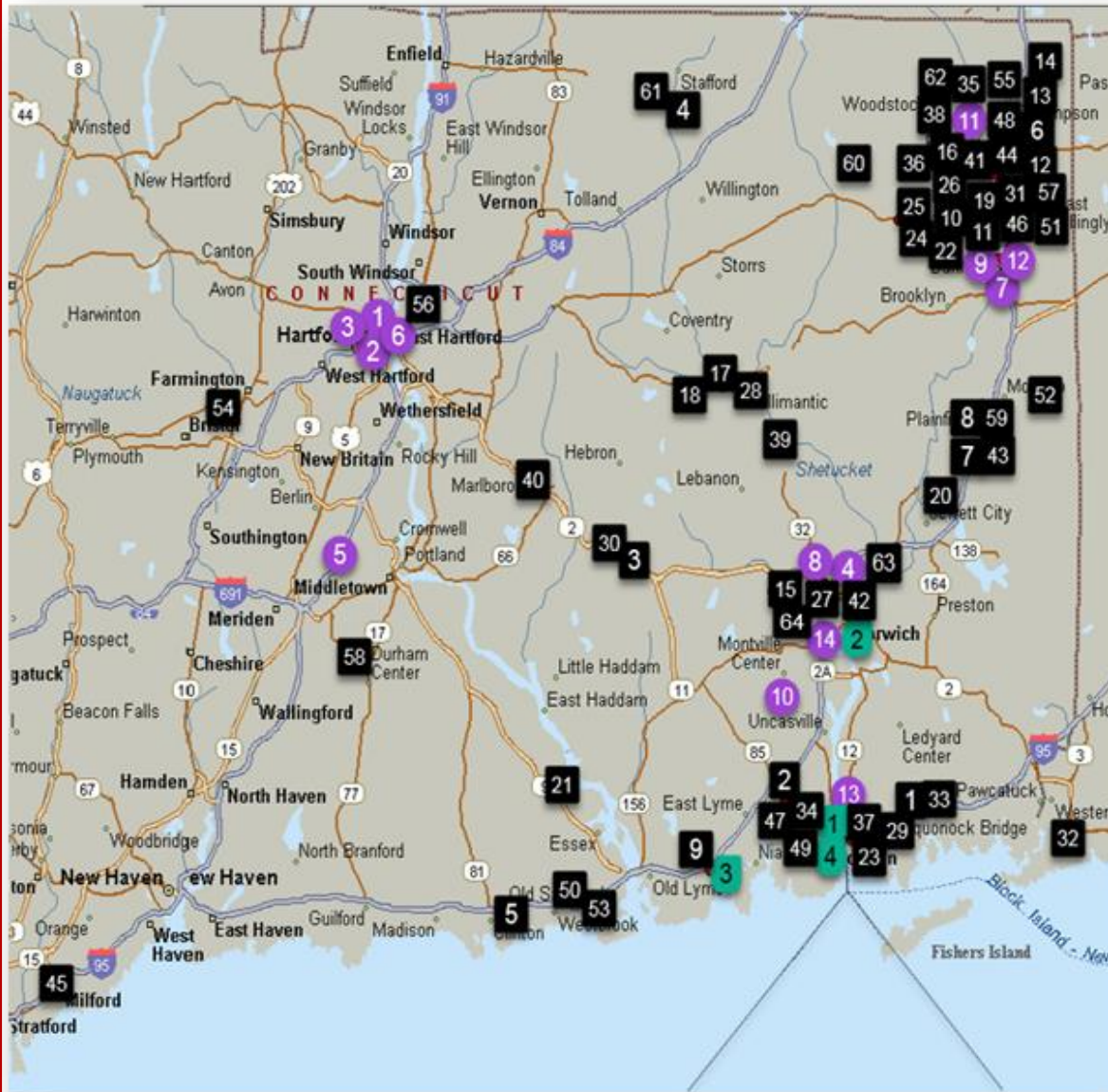
### 1. Labor market continues to tighten...

- Lower unemployment rate
- Fewer workers with relevant skills and experience

### 2. Talent acquisition strategies must:

- Cultivate “greener” workers
- Build skills via job training
- Emphasize career pathways for students
- Assign training budgets to skills needs of “green” workers





### EAMA Members:

1. Acme Wire Products Co. (Mystic)
2. Airgas USA, LLC (Waterford)
3. Alpha Q (Colchester)
4. American Woolen Co. (Stafford Springs)
5. Argo Transdata Corp. (Clinton)
6. ARS Products, Inc. (Putnam)
7. Bay State Machine, Inc. (Plainfield)
8. BGR Radiator (Plainfield)
9. Birk Manufacturing (East Lyme)
10. Bollore, Inc. (Dayville)
11. Boudreau's Welding Co., Inc. (Dayville)
12. C&M Corp. (Dayville)
13. Central Construction Industries (Putnam)
14. Century Tool Company (Thompson)
15. Collins & Jewell Company (Bozrah)
16. Colorado Industrial (Pomfret Center)
17. Columbia Manufacturing, Inc. (Columbia)
18. Connecticut Casket Co. (Willimantic)
19. CT Tool (Putnam)
20. Dante, LLC (Jewett City)
21. Deep River Plastics (Deep River)
22. Desmarais & Sons, Inc. (Dayville)
23. Electric Boat (Graton)
24. Ensinger Precision Components (Putnam)
25. ERW (Putnam)
26. Foster Corp. (Putnam)
27. Freeport McMoran (Norwich)
28. General Cable Corp. (Willimantic)
29. Hillery Company (Graton)
30. International Cordage East (Colchester)
31. International Paper (Putnam)
32. Ivory Ella (Westerly, RI)
33. J. Steele Services, LLC (Mystic)
34. Jaypro Sports (Waterford)
35. John M Dean Co (Putnam)
36. Kocek Company (Putnam)
37. LBI, Inc. (Graton)
38. Linemaster Switch Corp. (Woodstock)
39. Micro Precision, LLC (South Windham)
40. MPS Plastics (Marlborough)
41. New England Plasma (Putnam)
42. Plas-Pak Industries, Inc. (Norwich)
43. Pro-Manufactured Products (Plainfield)
44. Putnam Plastics Company (Dayville)
45. Q-Tran, Inc. (Milford)
46. Renchel Tool, Inc. (Putnam)
47. Seconn Fabrication (Waterford)
48. Slater Hill Tool, LLC (Putnam)
49. Sonalysts, Inc. (Waterford)
50. Sound Manufacturing (Old Saybrook)
51. Spirol Corp. (Danielson)
52. Sterling Precision Machining (Sterling)
53. The Lee Company (Westbrook)
54. Turbine Technologies (Farmington)
55. Unicorr Packaging Group (Putnam)
56. United Steel, Inc. (East Hartford)
57. Web Industries (Dayville)
58. Wepco Plastics (Middlefield)
59. Westminster Tool (Plainfield)
60. Whitcraft (Eastford)
61. Willington Nameplate (Stafford Springs)
62. Woodstock Line Company (Putnam)
63. Xuare (Norwich)
64. Faria Beede Instruments (Uncasville)

### Partner Members:

1. Astor Place (Platinum)
2. Eastern Savings Bank (Platinum)
3. Smith Insurance (Gold)
4. Carlin Construction (Silver)

### Associate Members:

1. CBIA
2. CCAT
3. CT Community College System
4. Consumers Interstate
5. CT Tech. High School System
6. DECD
7. Ellis Technical High School
8. EWIB
9. Killingly Economic Development
10. Montville Public Schools
11. Putnam Economic & Community Development
12. QVCC
13. seCTer
14. TRCC

For more information on EAMA or its members please visit us on the web: <http://eamainc.com>

108 New Park Avenue, Franklin, CT 06254



# Ecosystem - Teamwork

A multi-organization consortium to ensure execution of regional Manufacturing workforce development programs:

Area Councils of Government	Area Chamber of Commerce	Collins & Jewell
Cross Sector	CT Dept. of Econ. & Comm. Dev.	CT Department of Labor
CTDOL Apprenticeship	CT DOL Veterans	CT State Colleges & Universities
CT Technical High School System	Eastern Advanced Mfg. Alliance	Eastern CT Legislators
Electric Boat MDA/MTC	Employment & Training Institute	General Dynamics/Electric Boat
John J Driscoll Labor Agency	Local Elected Officials	Quinebaug Valley Community College
SE/CT Enterprise Region	SE/CT Central Labor Council	Sound Manufacturing
Three Rivers Community College	U.S. Rep. Courtney's Office	WIF Evaluator ( <i>Public Policy Assoc.</i> )
Westerly Education Center	Westminster Tool	Workforce Development Solutions
Xuare		



# Talent Pipeline Funding

## *Workforce Innovation Fund Grant*

- 1. Award:** \$6M from USDOL (*one of only six in country*)
- 2. Concept:** Develop skills for both the unemployed and underemployed to enhance their employability
- 3. Commitment:** 400 job placements (*450 Trainees*)
- 4. Timeline:** 3-years (*2016-2018*)
- 5. Training Curriculum:** Employer & academia designed



# E/CT Manufacturing Pipeline

## *Program Elements*

1. EWIB Portal enrolls interested candidates (*sourced mainly from American Job Centers*) – **CANDIDATE QUANTITY**
2. Employer-designed Assessments test basic skills (*Math, measurements, spatial reasoning, safety*) – **CANDIDATE QUALITY**
3. Job-specific, “*just-in-time*” training classes align jobseeker skills to hiring needs (*i.e. welding*) – **CANDIDATE QUALITY**



# E/CT Manufacturing Pipeline

## Class Schedule

Class	Provider	2016			2017				2018		
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
OSM #1	TR										
Intro to MFG. #1	QV										
OSM #2	TR										
Intro to MFG. #2	QV										
OSM #3	TR										
Intro to MFG. #3	QV										
Welders #1	TR										
Intro to MFG. #4	TR										
Intro to MFG. #5	QV										
Welders #2	TR										
Intro to MFG. #6	QV										
Welders #3	TR										
Intro to MFG #7	TR										
OSM #4	QV										
Welders #4	TR										
Intro to MFG #8	QV										
Intro to MFG #9	TR										
Pipefitter #1	Westerly										
Intro to MFG #10	QV										
Design #1	TR										
Welders # 5	TR										
Pipefitter #2	Westerly										
Design #2	TR										
Intro to MFG #11	QV										
Electrical #1	Westerly										
Welders #6	TR										
Pipefitter #3	Westerly										
Design #3	TR										
Sheetmetal/Shipfitter #	Westerly										
Intro to MFG #12	QV										
Welding #7	TR										
Pipefitting #4	Westerly										
Sheetmetal/Shipfitter #	Westerly										
OSM #5	QV										
Design #4	TR										
Intro to MFG #13	QV										
Design #5	TR										
Welding #8	TR										
Electrical #2	Westerly										
Design #6	TR										
Pipefitting #5	Westerly										
Class TBD	TBD										TBD
Class TBD	TBD										TBD
Class TBD	TBD										TBD
Class TBD	TBD										TBD
Class TBD	TBD										TBD



# Examining Program Performance

*As Of February 2018* (87% of Federal grant)

<i>Key Grant Metrics</i>	Goal	Actual	%
Applicants via EWIB Portal	1,175	5,489	467%
Enrolled in Training	392	513	131%
Job Placements	348	<b>809</b>	232%

**809 placements translate to 2,063 jobs** (multiplier effect)





# Expanding The Pipeline

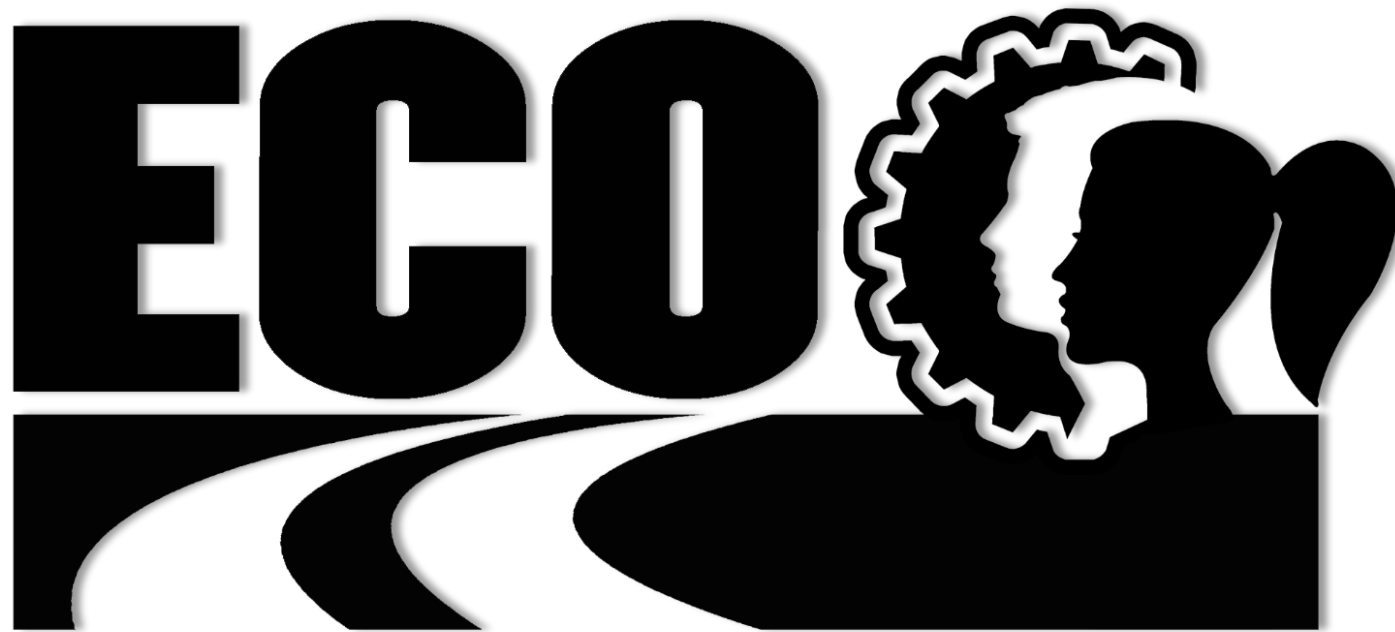
## *The NFA Pilot*

- **Business Strategy:** Increase Candidate Quantity Via Regional High Schools:
  - **Market Size:** *Nationally, 30% of high school graduates enter workforce & additional 21% quit after freshman year to enter workforce*
  - **Conclusion:** *Majority of high school graduates need career opportunity*
- **Pilot:** Norwich Free Academy (NFA) High School wants **maximum career opportunities for all graduates**
  - Link students to the MPI with EB/EAMA as program sponsor
  - Students will follow the MPI path: apply to portal, assessment, & a training program
  - Pilot Program Cohort: 12 students
- **Goal:** Roll-Out To More High Schools



Case Study 2:

**Early College  
Opportunity (ECO)**



# Early College Opportunity

## *Program Design*

- CT State Colleges & Universities system sponsored (*Available in select high school districts*)
- High school partnership with colleges & employers
- Replicates the IBM Model in Brooklyn, NY
- Sponsored by regional employers (*i.e. Electric Boat*)
- Student opportunity to earn diploma & Associates' degree
- Curriculum aligns classroom learning to employer workforce needs
- Mentor guidance from regional employers
- Graduates considered for positions at manufacturers



# Early College Opportunity

## *Program Results In Eastern Connecticut*

- New London and Windham school districts
- Third school year
- Funding supplemented by philanthropic gift from the Jeffrey P. Ossen Family Foundation
- High engagement from colleges, high schools, employers/mentors (*Electric Boat/EAMA*)
- More than 100 students enrolled in the program between Windham and New London districts
- Very favorable feedback from all stakeholders!



# Case Study 3: **Apprenticeships**



# Apprenticeships

- “*Learning While Earning*” :  
Develop green employees
- Length of Program:
  - MDA – 4-year program
  - MTC & Carpenters – 3-year program
- Education:
  - Three part; academic partnership (*TRCC*), Internal Subject Matter Experts and “On-the-Job Training”
  - Rotations through different areas of the business
  - Includes both credited & non-credited courses
- Diverse range of skills & knowledge designed to create a well-rounded employee with long-term career opportunities



