

# **BROADBAND DEPLOYMENT ADVISORY COMMITTEE (BDAC)**

**Broadband Infrastructure Deployment Job Skills and  
Training Opportunities – Working Group**

7/29/20

# Working Group Members

\* Main BDAC Members

1. Leticia Latino\* (Chair)
2. Rikin Thakker\* (Vice Chair)
3. Nayef Abu-Ageel
4. Miranda Allen
5. Earl Buford
6. Kelleigh Cole\*
7. Todd Crump
8. Robert Debroux\* (Alt. Tim Ulrich)
9. Douglas Dimitroff\*
10. Bill Esbeck
11. Zane Farr
12. Michael Hain\*
13. Kyle Hitchcock
14. Donald Knife
15. Eve Lewis\*
16. Charles McKee\*
17. Marquita Rockamore (Alt. Tondi Allen)
18. Steve Sellenriek
19. Dileep Srihari\*
20. Brent Skorup\*
21. Curt Stamp\*
22. Tom Struble\*
23. Larry Thompson\* (Alt. Julie Darrington)
24. Jenifer Vanek

# We want to cover today

- **Opening Remarks by Chair and Co-Chair**
- **This quarter at-a-glance**
- **Main Takeaways from SMEs**
- **Report Status**
- **Draft Recommendations**
- **Next quarter focus**
- **Open floor for comments and discussion**



# Opening Remarks

- **Chair: Leticia Latino van Splunteren**

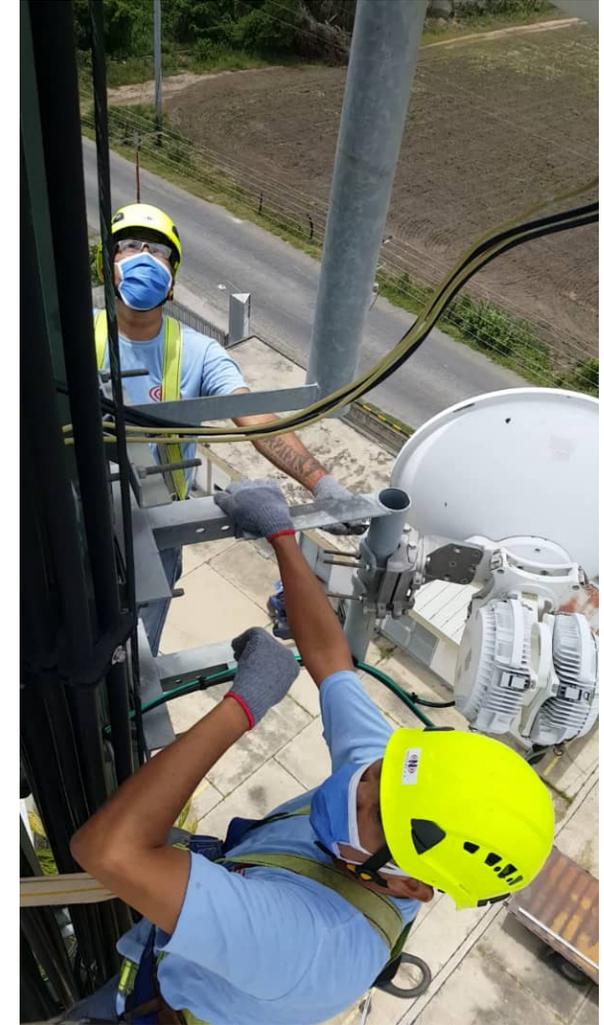
CEO, Neptuno USA Corp

[llatino@neptunousa.com](mailto:llatino@neptunousa.com)

- **Co-Chair: Rikin Thakker, Ph.D.**

VP of Telecommunications, Spectrum, Workforce Policy; MMTTC

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# This quarter at-a-glance

- In sharp contrast to many other industries, the telecommunication sector has been generally exempted from major COVID-19-related restrictions, such as stay-at-home orders and quarantine requirements, as it is recognized as an essential service. (IFC, World Bank Group)
- Network Construction: generally exempted from containment measures.
  - Short-term supply disruptions are expected to decline in the second half of 2020
- Operations and maintenance: remain largely uninterrupted.
  - Most players are well-stocked on critical inventory.
- Service Commercialization: Telecom demand spikes.
  
- 5G progress in connections and deployments continues despite the COVID-19 pandemic (June 24, 5G America)
  - There are now over 63.6 million 5G connections globally as of Q1 2020.
  - 5G connections will reach 10 millions in North America by the end of 2020

# This quarter at-a-glance

## SBA LOANS BY NORTH AMERICA INDUSTRY CLASSIFICATION (NAIC) SECTOR:

No Specific Sector for Communications/Telecom Broadband

### Industry by NAICS Sector

NAICS Sector Description	Loan Count	Net Dollars	% of Amount
Health Care and Social Assistance	508,145	\$66,781,156,115	12.91%
Professional, Scientific, and Technical Services	641,118	\$65,943,363,570	12.74%
Construction	468,156	\$64,113,731,038	12.39%
Manufacturing	230,003	\$53,696,102,072	10.38%
Accommodation and Food Services	368,311	\$41,874,859,061	8.09%
Retail Trade	451,441	\$40,080,460,085	7.75%
Other Services (except Public Administration)	535,476	\$30,876,639,581	5.97%
Wholesale Trade	167,698	\$27,506,682,339	5.32%
Administrative and Support and Waste Management and Remediation Services	241,866	\$26,205,302,079	5.06%
Transportation and Warehousing	194,794	\$16,913,955,937	3.27%
Real Estate and Rental and Leasing	247,091	\$15,420,146,121	2.98%
Finance and Insurance	169,475	\$12,000,306,409	2.32%
Educational Services	81,800	\$11,894,209,521	2.30%
Unclassified Establishments	221,914	\$9,833,348,981	1.90%
Information	69,358	\$9,205,660,921	1.78%
Arts, Entertainment, and Recreation	119,310	\$7,971,161,316	1.54%
Agriculture, Forestry, Fishing and Hunting	139,729	\$7,876,179,303	1.52%
Mining	21,616	\$4,469,100,815	0.86%
Public Administration	13,459	\$1,728,736,616	0.33%
Management of Companies and Enterprises	8,937	\$1,551,745,946	0.30%
Utilities	7,958	\$1,474,438,348	0.28%

Source: SBA.GOV



Approvals through 07/10/2020

8

# This quarter at-a-glance

## Workforce impacting news and Training Initiatives —

- June 16, 2020 NATE unveils framework outlining workforce strategic plan initiative
- June 22, 2020 Senators Wicker, Capito, Blackburn Introduce Bill to Accelerate Deployment of Rural Digital Opportunity Fund Broadband Networks (ABC Act).
- June 22, 2020 Learning Alliance unveils a TIRAP inspired Learning Management System.
- July 9, 2020 NWSA Announces Development of Spanish Language Tower Technician Assessments

# This quarter at-a-glance

- July 13, 2020 Food Companies, Rural Telecoms Form the “American Connection Project Broadband Coalition” to help Close Digital Divide



Coalition will advocate for public and private sector investment to bring high-speed internet infrastructure to rural areas. Members will also advocate for remote education, health and mental health services and job opportunities.

# This quarter at-a-glance

## **Working group Specific:**

- **Job skills Group Calls – Bi-monthly (9 calls this quarter)**
- **Subgroups met via conference call at their discretion**
- **One Subject Matter Experts Invited to speak to get deeper perspective on Grants and Training Programs Funding:**
  - Cesar Ruiz- President and CEO of Learning Alliance
- **Big focus on structuring gathered information and drafting report.**
- **Worked on Charge #5 - Identifying Performance Metrics.**

# Main Takeaways from SMEs:

## **FUNDING IS A KEY ASPECT OF WORKFORCE DEVELOPMENT AND AS SUCH THE WORKING GROUP INVITED:**

- Cesar Ruiz- President and CEO Learning Alliance

**Learning Alliance Corporation (LAC)** focus is in trade education and is tackling the wireless workforce skills gap through industry partnerships that provide critical training and apprenticeship programs. These programs benefit the industry by making it possible for individuals to obtain the certified training needed to secure employment and begin their telecom careers. LAC is an Authorized Training Partner for WIA's Telecommunications Education Center (TEC) and TIRAP approved pre-apprenticeship program .

# Main Takeaways from SMEs:

## Historical Funding Vehicles and Grant Agencies

- Department of Labor
  - Workforce Innovation and Opportunity Act (WIOA)
  - Regional Workforce Development Boards (WDB)
  - Employment and Training Administration (ETA)
  - Reentry Employment Opportunity (REO)
  - Apprenticeship USA
- Department of Education
  - Office of Special Education and Rehabilitative Services
  - Rehabilitation Services Administration
  - Vocational Rehabilitation Services (VocRehab)
- National Science Foundation: STEM Focus
- Department of Defense Education Activity (DoDEA)

# Main Takeaways from SMEs:

- 1. Utilize the data collected, learning paths and stakeholders**
- 2. Identify regional leaders in each of the (2) areas of focus:**
  - **Employer(s):**
    - a) **Lead and define requirements**
    - b) **Confirms the learning plan aligns with requirements**
    - c) **Commits to hiring or retention of candidates supported**
  - **Academic Partners and educational institution(s):**
    - a) **Build the curriculum stack**
    - b) **Market to the local community and identify participants**
      - I. Employees- underemployed or needing a defined skill**
      - II. Displaced Workers**

# REPORT STATUS

- Working group has produced a good rough draft of the report.
- Currently working on structuring and editing gathered information.
- Final report and recommendations will be presented in next BDAC Meeting scheduled for October 7-8, 2020

# Draft Recommendations

## #1 Broadband Brand Identity Crisis

- **Summary: There is an identity crisis in the broadband workforce.**
  - Most potential workers and students are not aware that broadband exists, nor do they know how to enter the field.
  - Do not know what the career paths are.
  - Education institutions lack awareness of employers' needs.
- **Recommendations:**
  - The industry must have a centralized effort to gain momentum.
  - A coalition could be formed to work together and ensure redundancy is not occurring.
  - There needs to be a centralized clearinghouse for all things broadband workforce related. This would be a website that would enable working together of trade groups and other stakeholders for funding and input.
  - The Industry must reach out and promote broadband deployment to all potential workers and students.

# Proposed Partnership of Our Trade Associations

***What if...Broadband trade association endorsed a joint effort?  
i.e: 'ConnectAmerica Workforce Initiative'***

- **CTIA**
- **CompTIA**
- **Fiber Broadband Association**
- **Fiber Optic Association**
- **NATE: The Communications Infrastructure Contractors Association**
- **NTCA: The Rural Broadband Association**
- **NRECA: (National Rural Electric Cooperative Association**
- **PCCA: Power & Communications Contractors Association**
- **TIA: Telecommunications Industry Association**
- **USTelecom : The Broadband Association**
- **WIA: Wireless Infrastructure Association**
- **Wi-Fi Alliance**
- **WISPA: Wireless Internet Service Providers Association**
- **WTA: Western Telecom Alliance - Advocates for Rural Broadband**

# #2 Lack of standardized and nationwide training programs

- **Summary:** lack of widespread-advertised availability and offering of training programs geared toward the broadband deployment workforce.
  - Current broadband technicians have individualized skillsets, and employers or educators have a hard time grouping them together for purposes of recruiting, and even training for that matter
  - Adult Basic Education (ABE) programs and Community Tech Colleges have not partnered in this arena to create articulated education and training opportunities for these learners (WIA's DOL Grant is a welcome sign).
  - Lack of professional degree program. Lack of standardization for effective curriculum.
- **Recommendations:**
  - Some successful programs exist (e.g. WIA's Telecom Education Center). More employers and associations need to embrace/explore that (don't reinvent the wheel).
  - Creation of a recurring in person or virtual "summit", at a local/state level, to bring together employers and training providers to create community and align their initiatives and goals.
  - Use Workforce Development Boards to elevate visibility of employer needs and post-secondary programming to support creation of articulated content.
  - Rapid development of curriculum is necessary for Higher Education and training institutions to respond to employer need.

# #3 Lack of Federal and State funding for training programs

- **Summary:**

- Grant and funding allocation by the federal (e.g. USDOL) and state workforce agencies towards Communication Industry is low
- There is not sufficient awareness regarding the return on investment with programs such as registered apprenticeships, which help create more productive, competitive, and profitable companies.
- Employers have funding allocated for “continuing education”, however, that’s mainly for graduate studies (MS or MBA). Professional training funding is not constant.

- **Recommendations:**

- Employers need to learn more about and support youth and adult programs such as CTE, ABE, and apprenticeships.
- Employers need to look at examples of success stories of those employers who invested in the training programs.
- USDOL should increase their grant and contract funding for Apprenticeships for 5G and Communication Industry in general.

# #4 Lack of standardized wages and universal credentialing of skilled workers

- **Summary:** To recruit and retain high quality and skilled employees, it is necessary for employers to offer competitive wages and benefits packages.
  - In the professional field of broadband deployment, the pay and travel requirements are not as competitive as other industries (e.g. Networking, Cloud, IT).
  - Same title can carry different job description and salary (e.g. Telecommunication Technician; \$17/hr average, high \$38/hr)
  - Lack of industry accepted credentialing system
- **Recommendations:**
  - Broadband technician and other jobs: wage, salary and benefits standardization
  - Closing the door at disparate compensation that promotes employee mobility between companies
  - Employment classification systems have created a barrier to tracking and supporting broadband jobs.
  - Since job codes within O\*NET are not specifically classified as broadband, academic institutions, industry and workers should come to an agreement on which codes to universally use under this system.
  - More broadband jobs needs to “created” for the U.S. DOL database; will help create common credentials

# #5 Unique demands of the work: Seasonal, High Liability

- **Summary:** the on-call, on the road, unpredictable demands of the work may narrow the pool of applicants
  - Factors such as climate and weather make some broadband deployment positions seasonal.
  - It difficult to offer job security to employees.
  - Working at heights: high liability components of that work create commercial contractual demands among the stakeholders too stringent for smaller companies to enter the market
  - Many position require CDL; must be 21 years of age.; further limits the eligibility of youth
- **Recommendations:**
  - Establish career path, and account for seasonal fluctuations
  - Integrate small companies with some of the most experienced employees by negotiating liability-sharing deals so the work is not cost prohibitive
  - Consult with lawmakers to address the age requirement for obtaining CDLs for broadband intrastate work

# #6 Dwindling workforce: retirement and other reasons

## ■ **Summary: Retirement; Career Change**

- 73 million baby boomers in the United States. By 2030, this entire generation will be age 65 or older as roughly 10,000 boomers are reaching this standard retirement age on a daily basis.
- Changing career to high paying jobs where employer sponsored training is common (e.g. Cloud, IT)

## ■ **Recommendations:**

- Focus on reskilling, Invest in training programs
- More campus recruiting, information sessions about our industry
- Keep current workforce motivated and engaged
- Grab this opportunity and invest to diversify new workforce
  - Underrepresented communities, Women, Veterans

# #7 New Environment created by COVID-19

## ■ **Summary:**

- Like many industries, the stakeholders involved in broadband deployment are reassessing their Pre-COVID-19 challenges
- Network deployment and maintenance will continue; however some part of the business might be impacted (retail stores, sales, customer-facing field support etc.)
- Many public colleges are expected to shrink the size of their operations due to budget cuts in state funding and reduced student enrollment.

## ■ **Recommendations:**

- Unfortunately, the unemployment number will stay high for some time → shortage of workforce should not be an issue for broadband/telecom with right training
- Have the plans ready for on-boarding training – Classroom and On-the-job Training
- This is the right time get associated with apprenticeship programs.
- Employers should invest in saving existing professional programs at local universities
- Engage in high schools: Add Broadband to AP program and CTE. Many states offer money for this and offer high school students to take introductory courses.

# Focus Next Quarter

- **Monitor COVID-19 Pandemic Status and its impact on draft recommendations to make any necessary modifications prior to final report issuance.**
- **Finalize work for Charge 5 – Performance Metrics and Glossary**
- **Final Editing and Revision of Final Report**

# Industry Engagement KEY for rebranding

Learning Alliance

464 Tweets

Following

Learning Alliance Retweeted

Upwork @Upwork · Jul 10

.@Learng\_Alliance trains U.S. veterans to become certified tower and fiber-optic technicians. They will use their Work Together Talent Grant to create an e-learning platform to help American veterans transition into these high-demand, high-wage jobs:



Learning Alliance | Upwork

Learning Alliance will use their Work Together Talent Grant to support an e-learning platform that trains U.S. veterans for high-demand, high-wage...

upwork.com

1

2

2

↑



WIA @WIAorg

If these wireless workers carrying heavy equipment, 100 ft in the air, and suspended on a tower can wear a mask, so can you. Proud of our members doing their part to be safe and to build America's broadband networks #WearAMask #MembersWithMasks h/t @letilatino @TilsonTech



10:07 AM · Jul 22, 2020 · Twitter Web App

Senate Commerce Retweeted



Ajit Pai @AjitPaiFCC

I applaud @SenateCommerce Chairman @SenatorWicker, @SenCapito, & Sen. @MarshaBlackburn for introducing the Accelerating Broadband Connectivity Act. It would provide new funds for Rural Digital Opportunity Fund auction winners to deploy broadband faster. Big win for rural America!

The Accelerating Broadband Connectivity Act would:

- Create a fund to be used by the FCC following the RDOF Phase 1 auction to incentivize winning bidders to complete their buildout obligations on an accelerated timeline;
- Build upon the existing RDOF process to get high-speed broadband service to rural consumers much faster than the current timetable for deployment using RDOF dollars;
- Require service providers who receive funds from the Accelerating Broadband Connectivity (ABC) Fund to meet a series of accelerated milestones for their RDOF deployments;
- Allow the FCC to conduct the auction in a way that maximizes value to American taxpayers while connecting consumers more quickly.

11:39 AM · Jun 23, 2020 · Twitter Web App

37 Retweets and comments 86 Likes



# Leverage social media and be visible!

**#ConnectAmericaWorkforce**

**#BroadbandWorkforce**

**#WorkforceDevelopment**

**#TelecomCareers**

**#Apprenticeships**

**#CoolJobs**

# **OPEN FLOOR FOR COMMENTS AND DISCUSSION**

# Challenges Contributing to Skills Gap and Workforce Shortage

- 1. No consolidated brand or identity**
- 2. Lack of standardized and nationwide training programs**
  - Lack of career paths and professional degree programs**
  - Lack of standardization to develop effective curricula**
- 3. Lack of Federal and State funding for training programs**
  - Lack of enterprise investment in training and offset of training expenses**
- 4. Lack of standardized wages and universal credentialing of skilled workers**
- 5. Unique demands of the work: Seasonal, High Liability**
- 6. Dwindling workforce due to retirement**
- 7. New Environment created by COVID-19**

# Working Group Charges

- **Develop recommendations to make more widely available and improve job skills training and development opportunities for the broadband infrastructure deployment workforce.**
  1. **Identify any gaps** in broadband infrastructure deployment skills that could inhibit the pace of deployment of **fixed and mobile broadband connectivity** across the nation.
  2. For each issue identified, **formulate possible solutions that stakeholders** could implement. Proposed solutions, to the extent possible, should be **adaptable and scalable** to different deployment areas and technologies to encourage widespread adoption.

# Working Group Charges

3. **Recommend possible steps** that stakeholders could take to **attract more skilled professionals** to join the broadband infrastructure deployment workforce.
4. Identify any **existing job skills and training programs** that could serve **as a model** for stakeholders in developing measures to bridge any skills gaps in broadband infrastructure deployment.
5. Recommend possible **performance metrics to gauge the effectiveness** of existing and future job skills and training programs and develop steps that can be taken to continually improve the effectiveness of such programs.

# STRUCTURE OF THE REPORT:

- 1) Introduction and Background**
  - **Working Group Charges**
- 2) Identification of Stakeholders**
  - **How the report is structured**
- 3) Skills Gap for Broadband Deployment and Associated Challenges**
  - **Why do we have skills gap? (three sub-sections, one per each subgroup)**
  - **Results in Brief or Summary of Challenges and Solutions (response from the working group members to the questionnaire)**
- 4) Proposed Solution – How to attract more skilled professionals**
  - **(has to be adaptable and scalable)**
  - **(has to be applicable to different deployment areas and technologies)**
- 5) Examples of Successful Job Training Programs**
  - **Recommendation on Nationwide Roll Out**
- 6) Performance Metrics to gauge the effectiveness**
- 7) Definition/Terminology/Glossary of terms**