

Shaping the Workforce of Tomorrow: Insights, Initiatives & Action



Generational Shift



2006 - 2008



Industry Evolution

Prior to
1990



1990

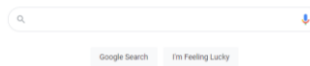


2000

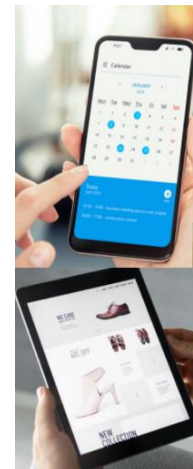
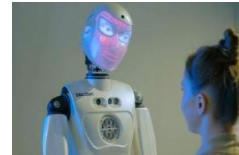


facebook

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2010



2020

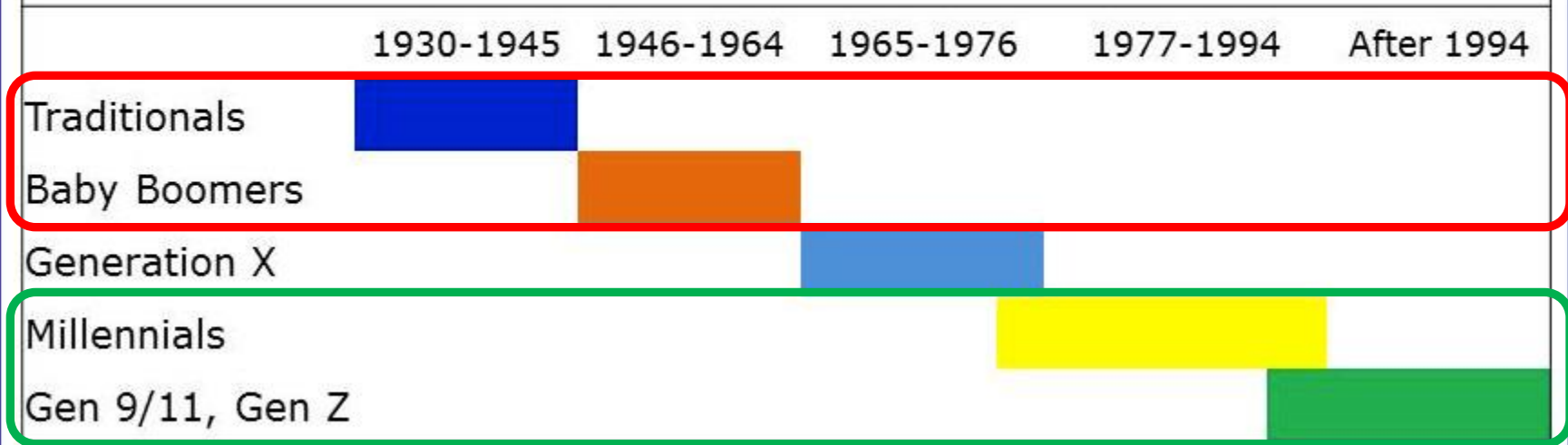


2026



Framework for Workplace Generations

From the book, Forgotten Respect, 2015, Dennis E. Gilbert



* Experts positions vary slightly, especially in the definition of Millennials and Generation 9/11 (Gen Z)

Target Generation

- Millennials [27 to 44] – Career Change
 - Other construction sectors
 - Other industries
 - Military
 - Etc...
- Gen Z [26 and Younger] – First Career
 - High School
 - Vo/Tech School
 - Two-year/Four-year Colleges

Millennial Characteristics

- Loyalty-lite
 - Expect to have 4 or more employers in their career
- Prefer to communicate electronically
- Desire global work experience
- Value mentorship
- Look for personal development
- Responsibilities

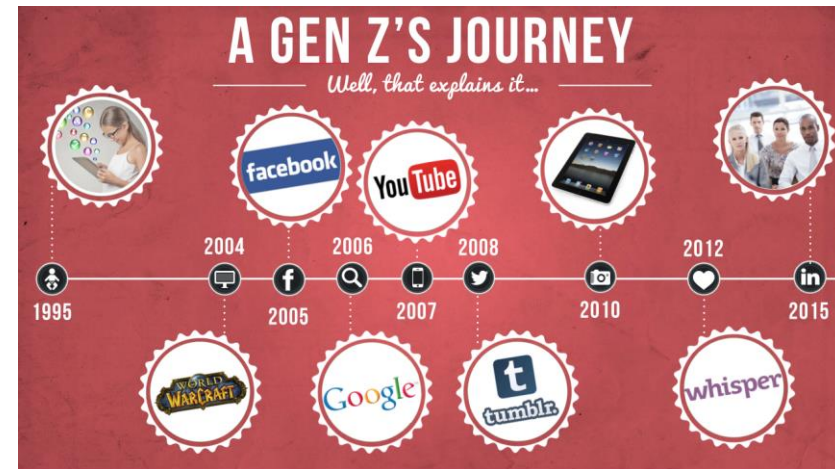


Millennial Characteristics

- Work/life balance more important than financial reward
- Career progression a top priority
- Good benefits packages
- Flexible work arrangements
- Training/development programs
- Competitive wages
- Good organization reputation important

Gen Z Characteristics

- Open-minded
- Responsible
- Security, safety, privacy
- Entrepreneur drive
- Online Presence
- In-person communication
- Active engagement [with leaders]
- Opportunity to present their views
- Community Involvement




Gen Z Characteristics

- Technology integration
- Credentialing vs. four-year school
- Money conscious
 - Minimalist
 - Debt-free
- Benefits
- Work-life balance
- Visual Career Path
- Mobile
 - Experiencing new places/things

RV News
Forbes: Schools Bet on Skilled Trades Over Degrees

Blue-collar jobs are gaining popularity as AI threatens office work
There is no shortage of hype around AI coming for jobs, and while the U.S. labor market has begun to sputter, hard evidence of AI-related job losses is scarce.

More parents are done pushing college. 1 in 3 are now betting on trade school instead
By Sydney Lake
Associate Editor
March 31, 2026, 2:48 PM ET
[Add us on](#) 

Forbes
LEADERSHIP > CAREERS
College Versus Trades: A False Dichotomy It's Time To Reject

Common Challenges to Attract / Retain

- Roofing as an Occupation is Misunderstood [Industry Perception]
- Competition
- Job Requirements
- Visual Career Path

Industry Perception

What Roofers Do


Roofers replace, repair, and install the roofs of buildings.

Work Environment

Roofing work is physically demanding because it involves climbing, bending, kneeling, and heavy lifting. Roofers may work overtime in order to finish a particular job, especially during busy summer months.

How to Become a Roofer

There are typically no formal education requirements for roofers. Although most roofers learn on the job, some enter the occupation through an apprenticeship.

	Roofers	Roofers replace, repair, and install the roofs of buildings.	No formal educational credential	\$50,970
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Competition

- Salary / Benefits
- Other Companies
- Other Construction Sectors
- Other Industries



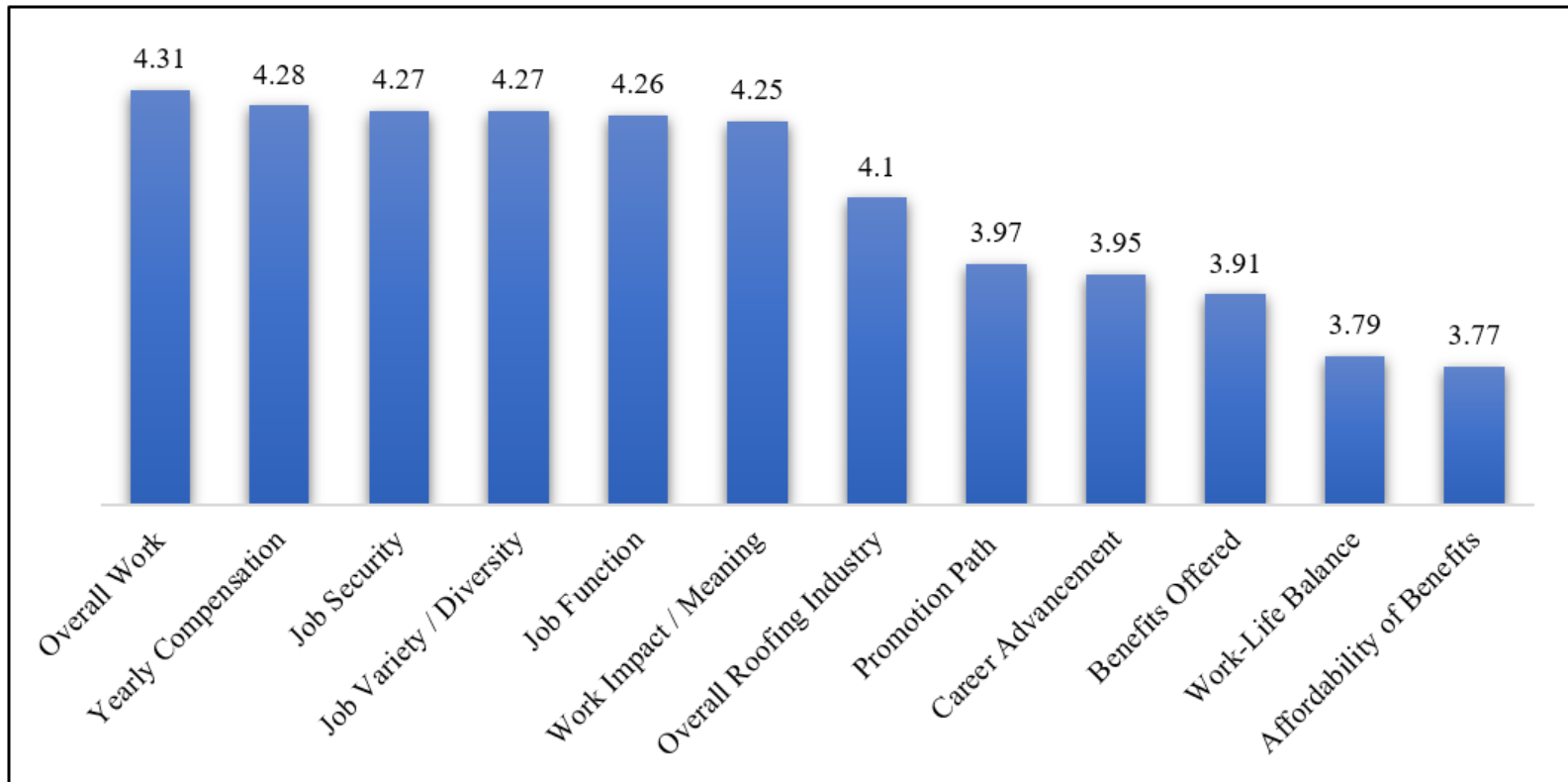
The foundation for the industry



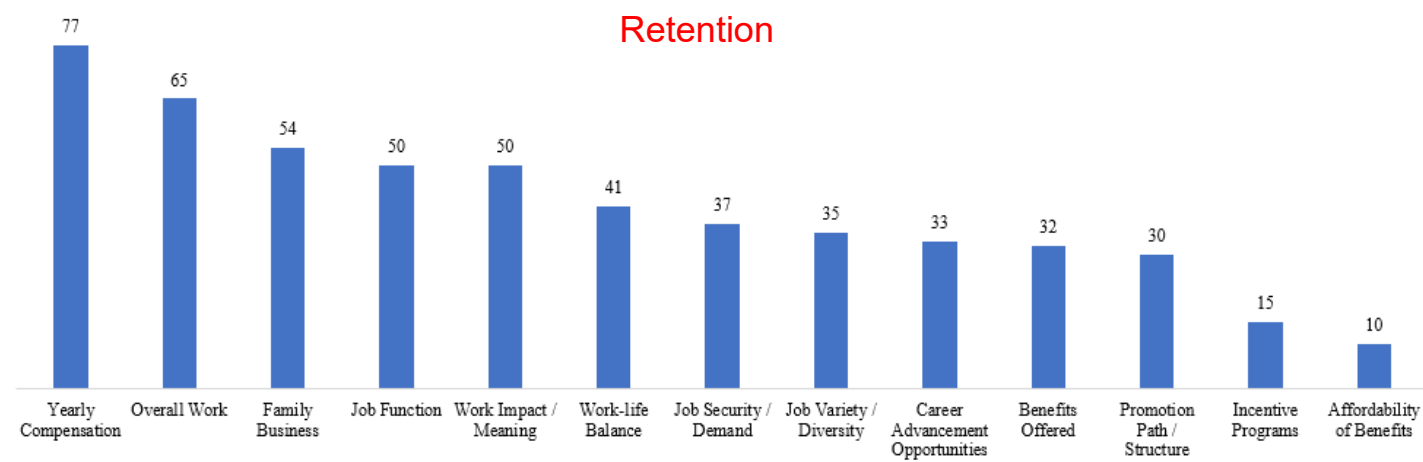
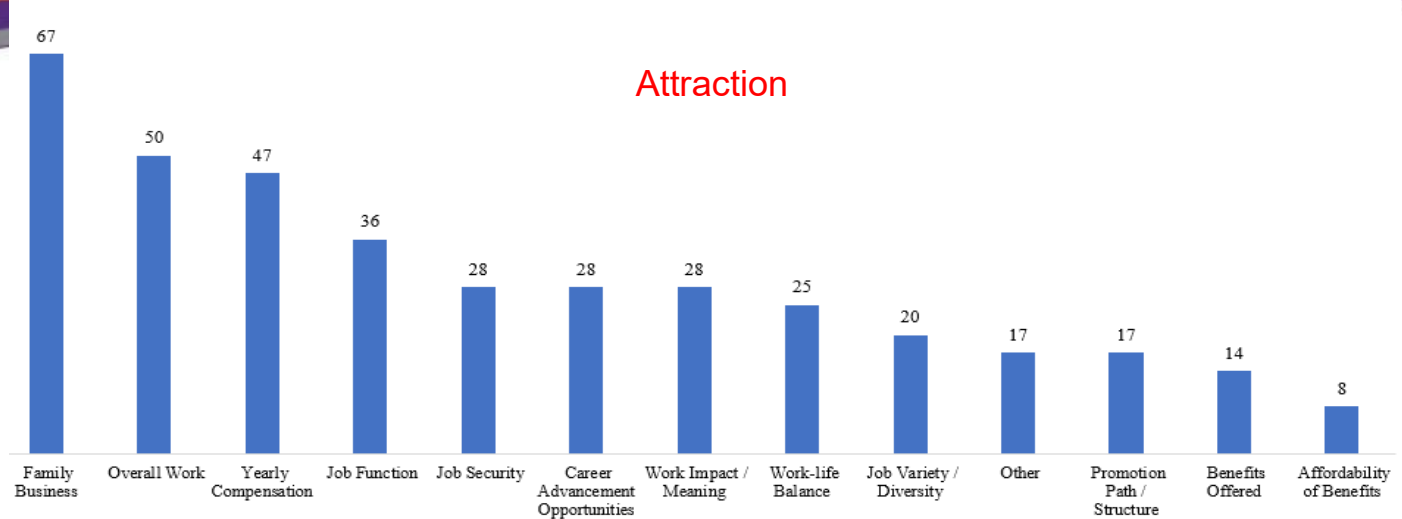
Nieri Department of
**CONSTRUCTION AND
REAL ESTATE DEVELOPMENT**

What Does Our Current Workforce Think of the Roofing Industry?

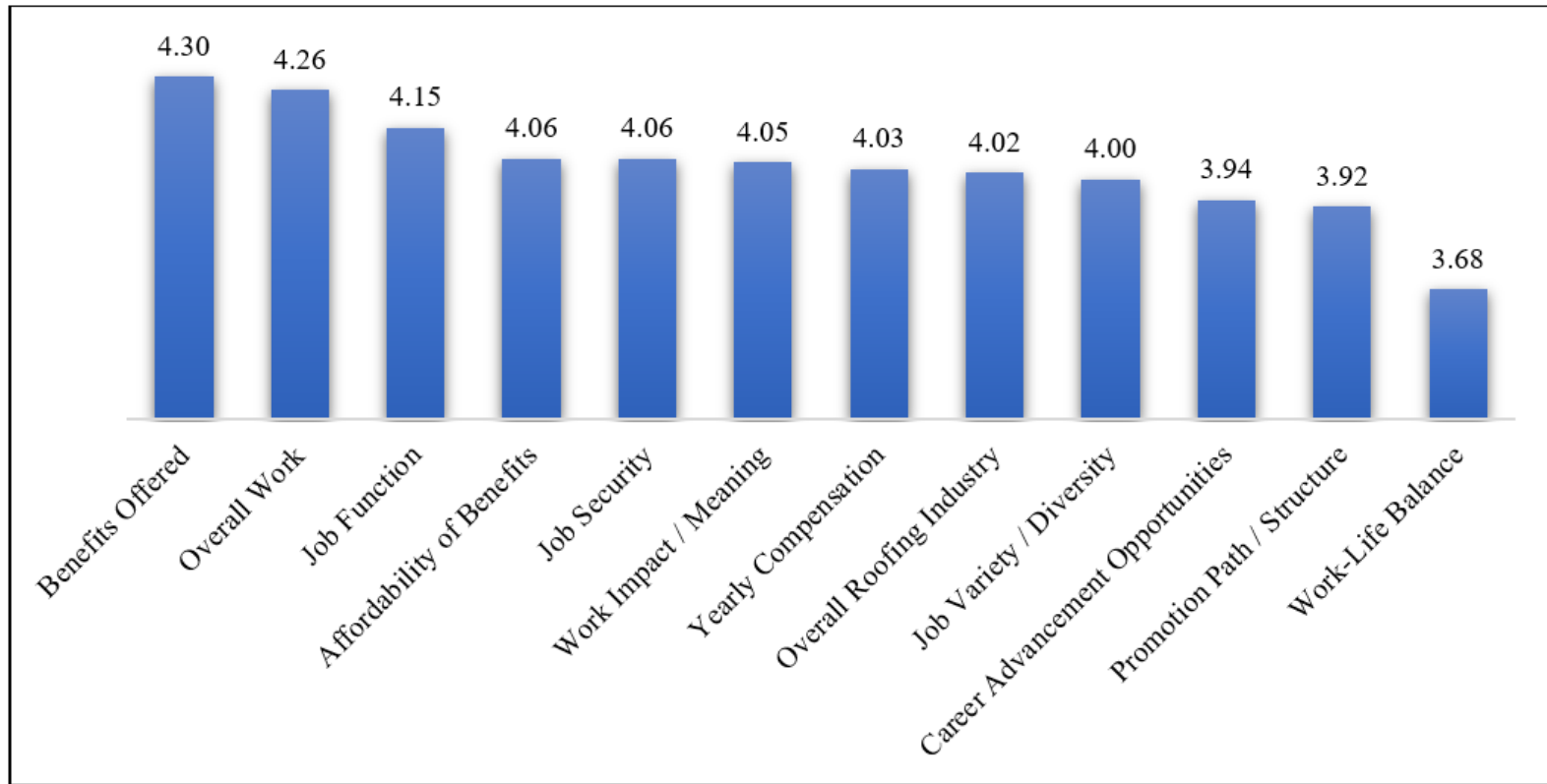
Overall Satisfaction - Contractor



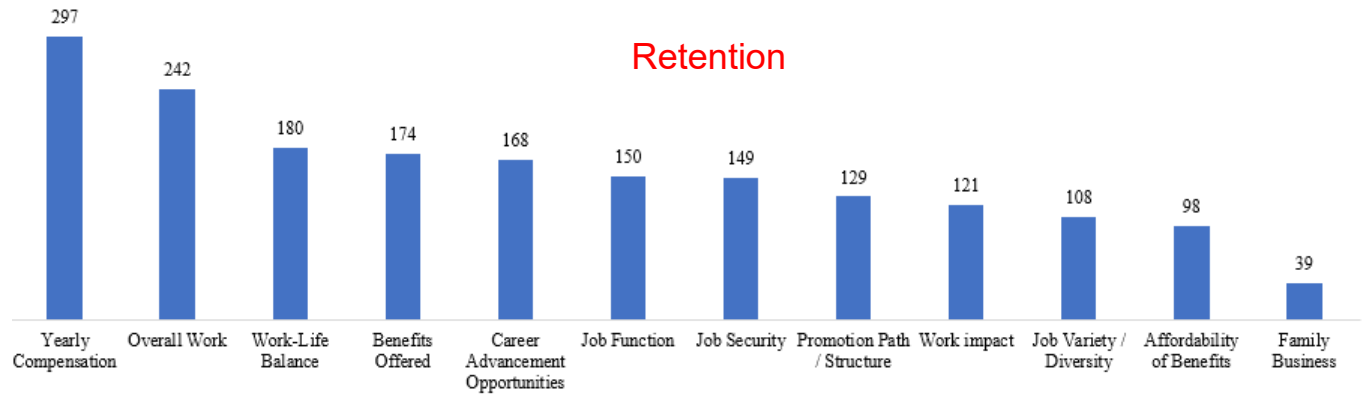
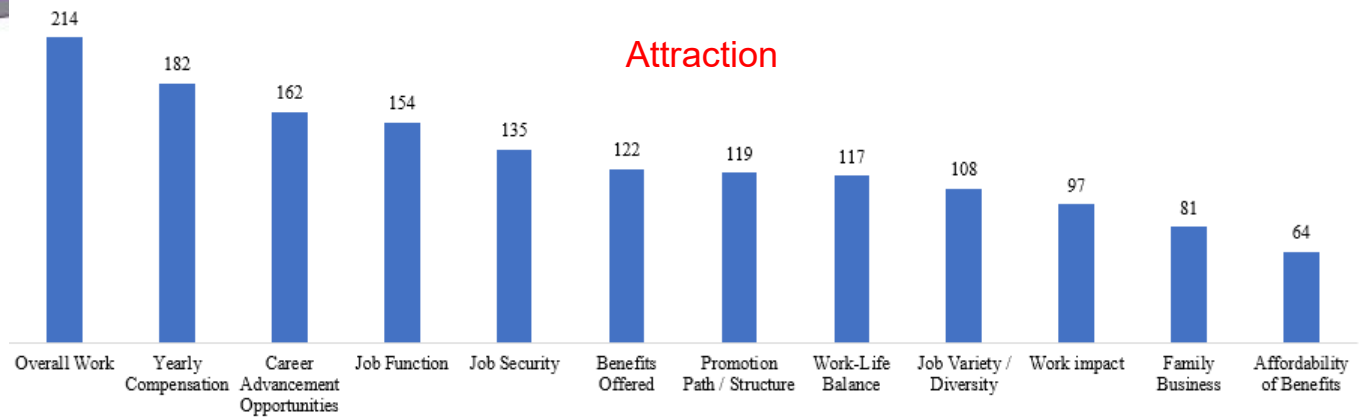
Attraction & Retention Factors



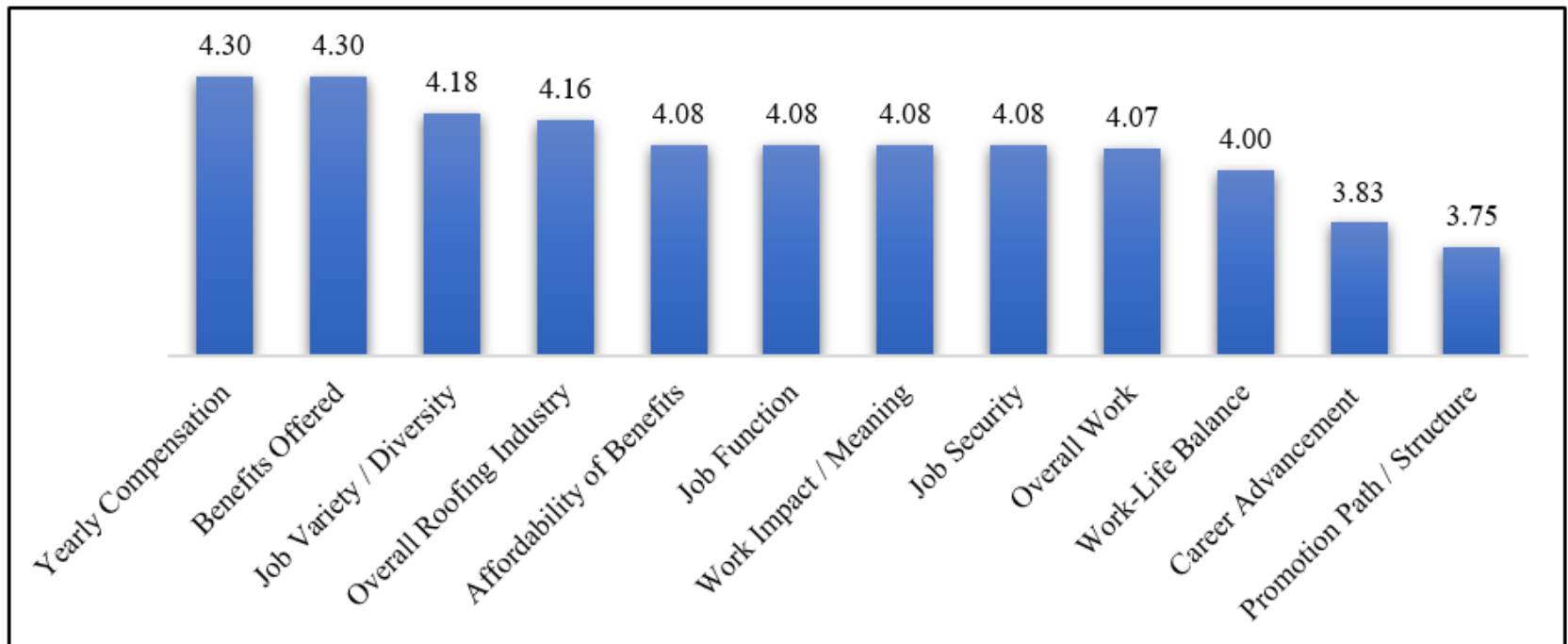
Overall Satisfaction - Distributor



Attraction & Retention Factors



Overall Satisfaction - Manufacturer



Is Roofing The Only One Struggling With These Challenges?

Let's Take A Look....



Associated General Contractor Workforce Survey

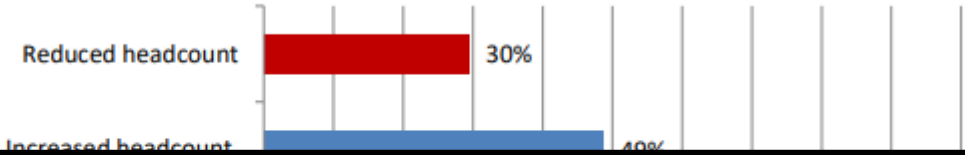
Source: https://www.agc.org/sites/default/files/users/user21902/2025_Workforce_Survey_National_FINAL_m.pdf



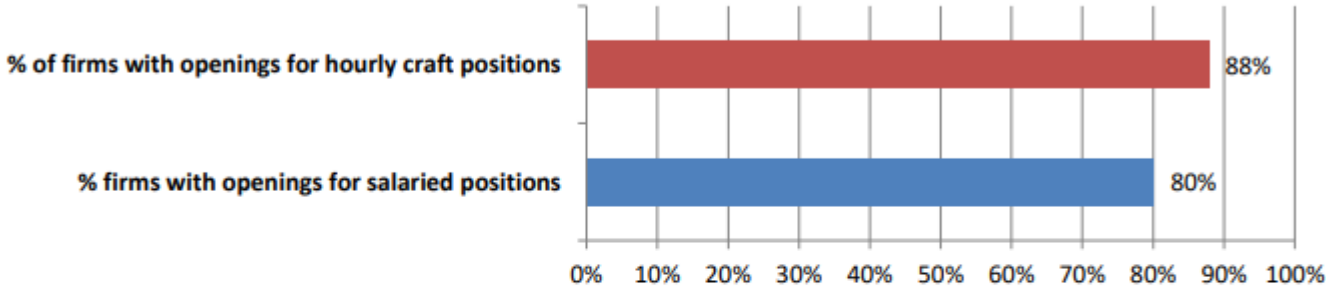
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AGC Workforce Survey

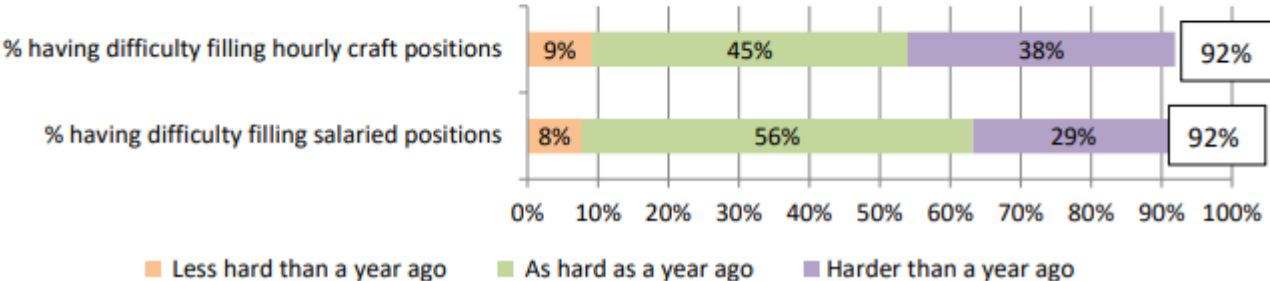
1. By what percentage has your firm's headcount changed in the past 12 months? Responses: 1,340



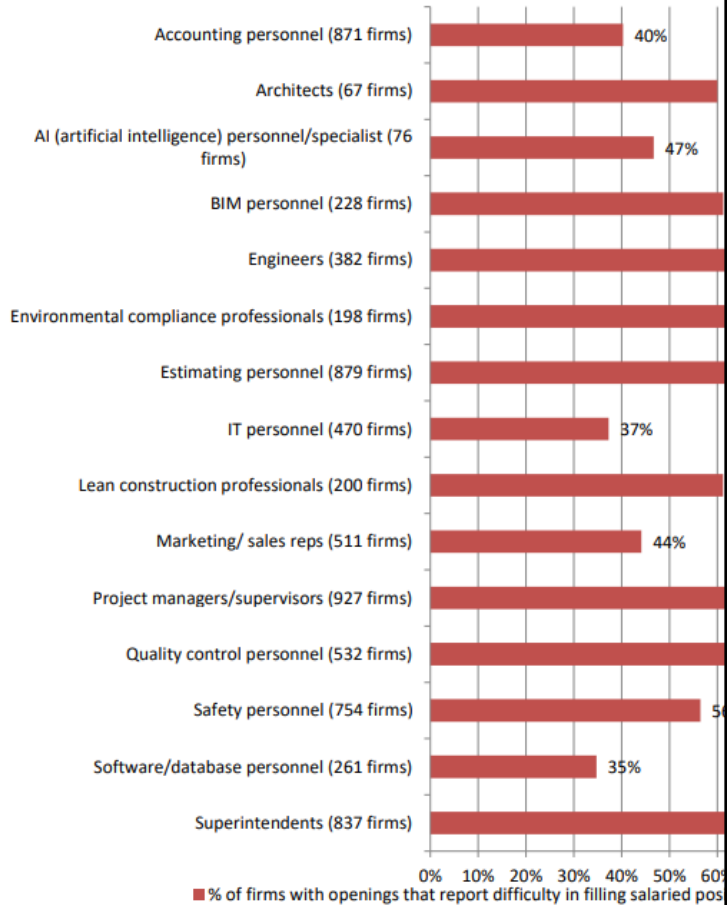
2. Do you currently have an open hourly craft or salaried position? Responses: 1,041 Salaried; 999 Craft



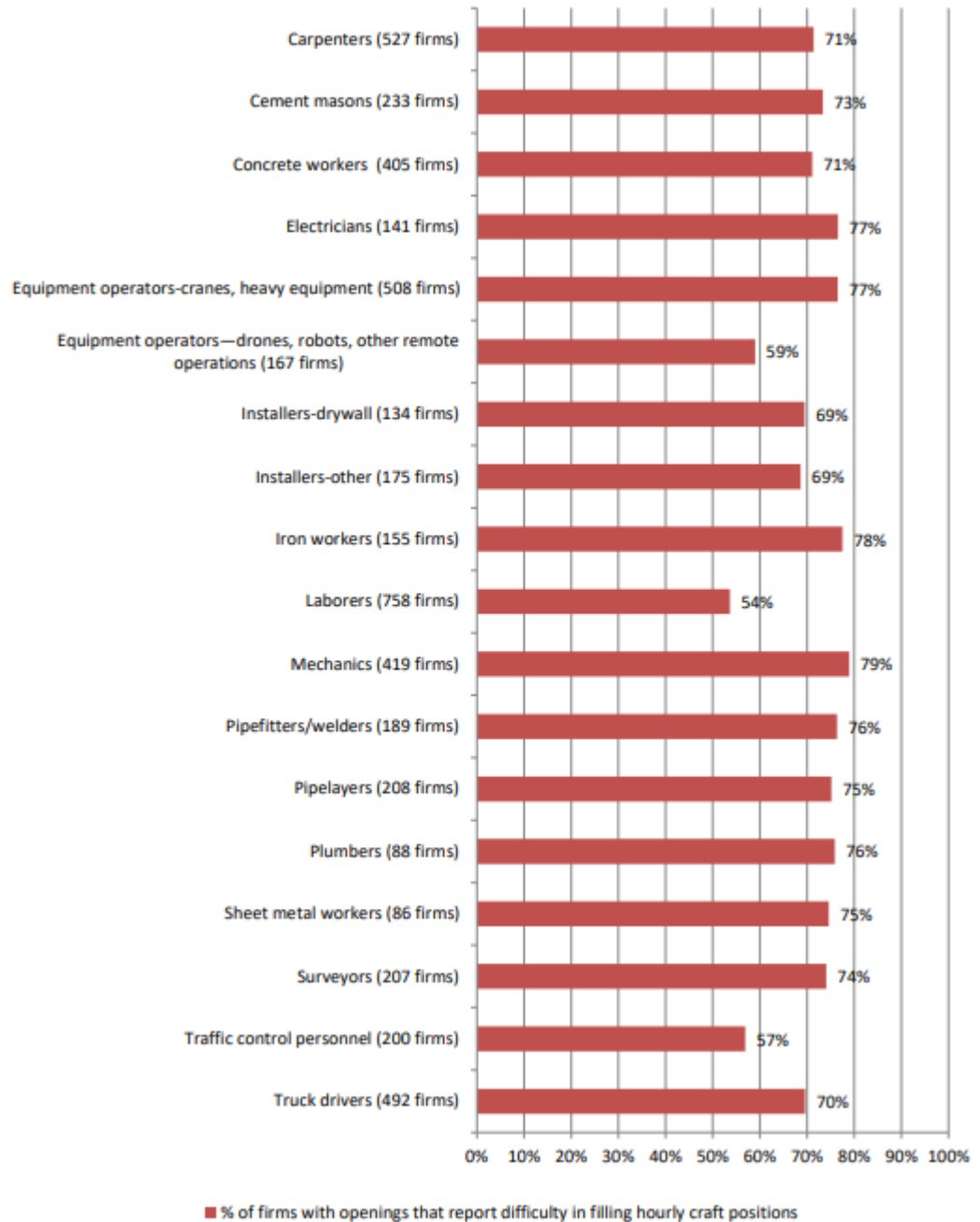
3. Describe your difficulty in filling open positions: Responses: 1,041 Salaried; 999 Craft*



5. If your firm is having trouble filling salaried positions, please indicate all the positions that are having trouble filling (Mark all that apply) Responses: 1,024



6. If your firm is having trouble filling hourly craft positions, please indicate all the position types you are having trouble filling (Mark all that apply). Responses: 980

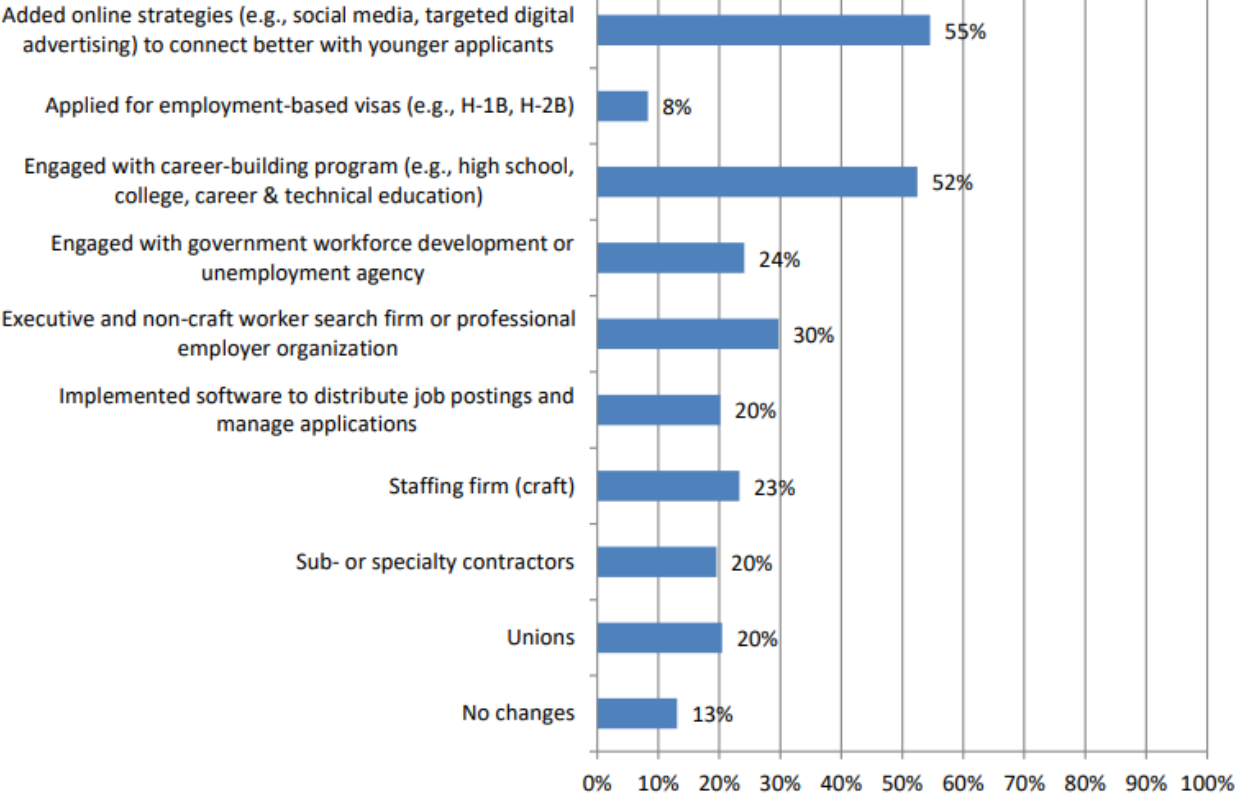


AGC Workforce Survey

7. If you are having trouble filling positions, what are the reason(s)? (Mark all that apply) Responses: 969

- No openings or no trouble filling available positions
- Potential employees report needing flexible work schedules/remote work option (e.g. because of lack of child care or care for a family member)
- Potential employees report difficulty acquiring required transportation to and from a jobsite
- Potential employees cannot pass a drug test
- Potential employees lack required credentials (e.g., driver's license, work permit, clean background check)
- Available candidates are not qualified to work in the industry (e.g., lack of skills, no certificate or license for position)
- New hires fail to show up or quit shortly after start

8. Has your firm added or increased use of the following to acquire workers in the past 12 months? (Mark all that apply) Responses: 962

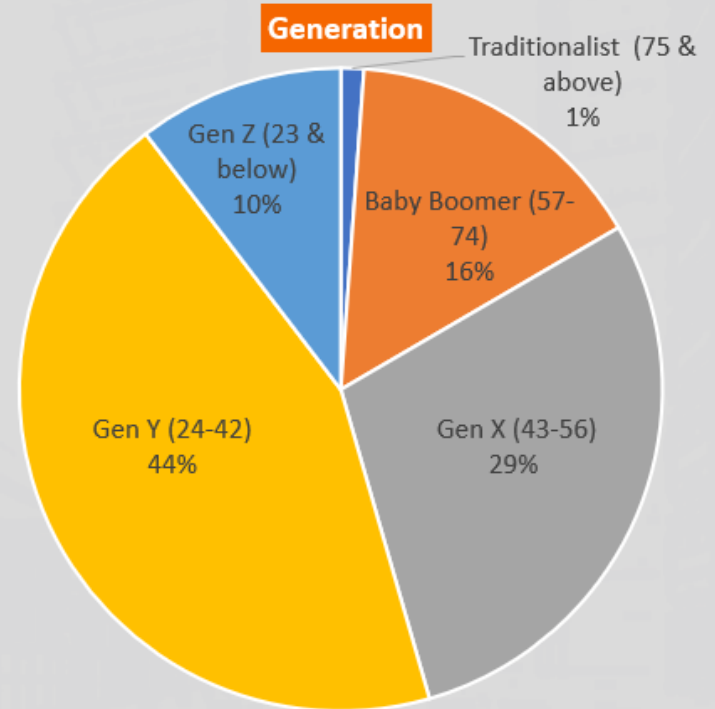


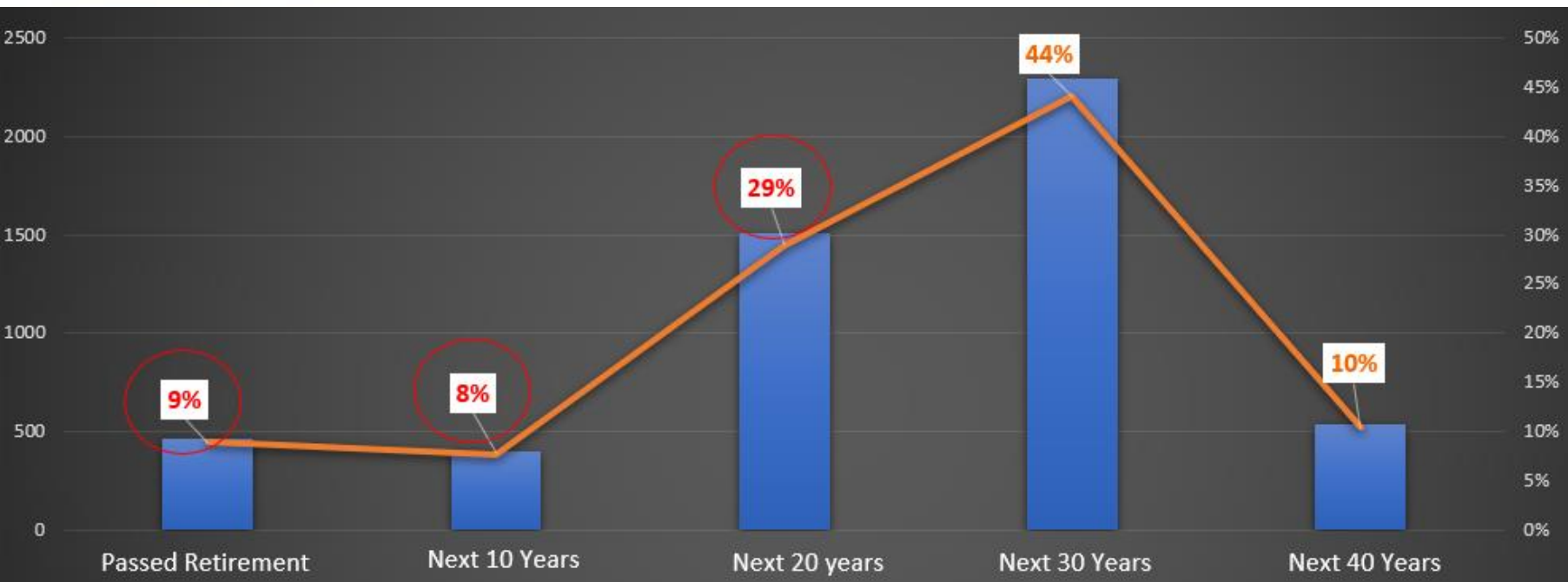
Southeast Region Study



Distribution of Generations

Overall	#	%
Traditionalist (75 & above)	60	1
Baby Boomer (57-74)	804	15
Gen X (43-56)	1,507	29
Millennials / Gen Y (24-42)	2,294	45
Gen Z (23 & below)	540	10
Total	5,205	100





By 2036 (in next 10 years)– 31% workforce will retire!

The Roofing Alliance and CM Schools

April 1, 2026

In the beginning....

- One guy with a good idea stood up at the end of a meeting

Our first visit – to fort collins

- Dr. Mostafa Khatab advised us:
 - Plan for the long game
 - Get faculty engaged
 - Get students engaged
 - Get involved with ACCE

So, a strategy emerged

- Offering grants to faculty members for research related to roofing
- Creating a student competition
- Conducting faculty retreats
- Joining ACCE

And through ACCE....

- I met Mike Jackson, from Clemson
- Our discussions continued – with lunch, to meet his new Associate Professor who had a background in roofing
- And they proposed to develop a course on roofing at Clemson

So today, at Clemson

- 4 roofing courses are being offered
- Students in the CM program will be able to graduate with a minor in roofing
- And a new Roofing Center has been created, thanks to the Alliance

There's more than just Clemson

- A Fellow is being funded at Arizona State University, thanks to AZ contractors, the AZ Association's foundation and the Roofing Alliance
- Her thesis will be based on showing the value of roof maintenance programs
- At Texas A&M – research on why roofers choose not to follow good safety practices

How you can get involved

- Every accredited CM program is required to have an “Industry Advisory Board,” composed of members from the industry.
- Every CM program is anxious to have guest speakers
- Best first step: introduce yourself to the program chair.
- Locally: Colorado State and University of Wyoming both have good CM programs

But then there is Clemson...

- And Dhaval Gajjar is fully engaged with the roofing industry – as are several of his colleagues

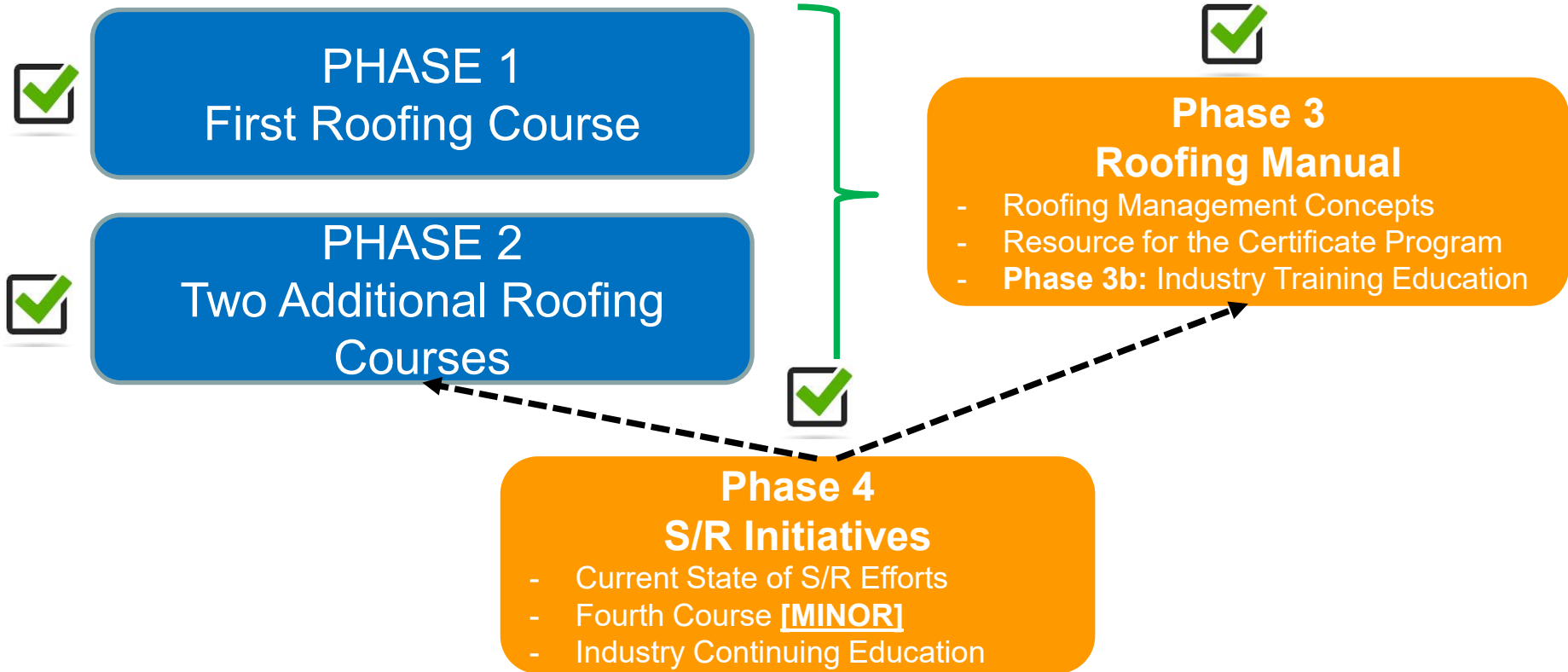
Roofing Alliance – Clemson University Initiatives



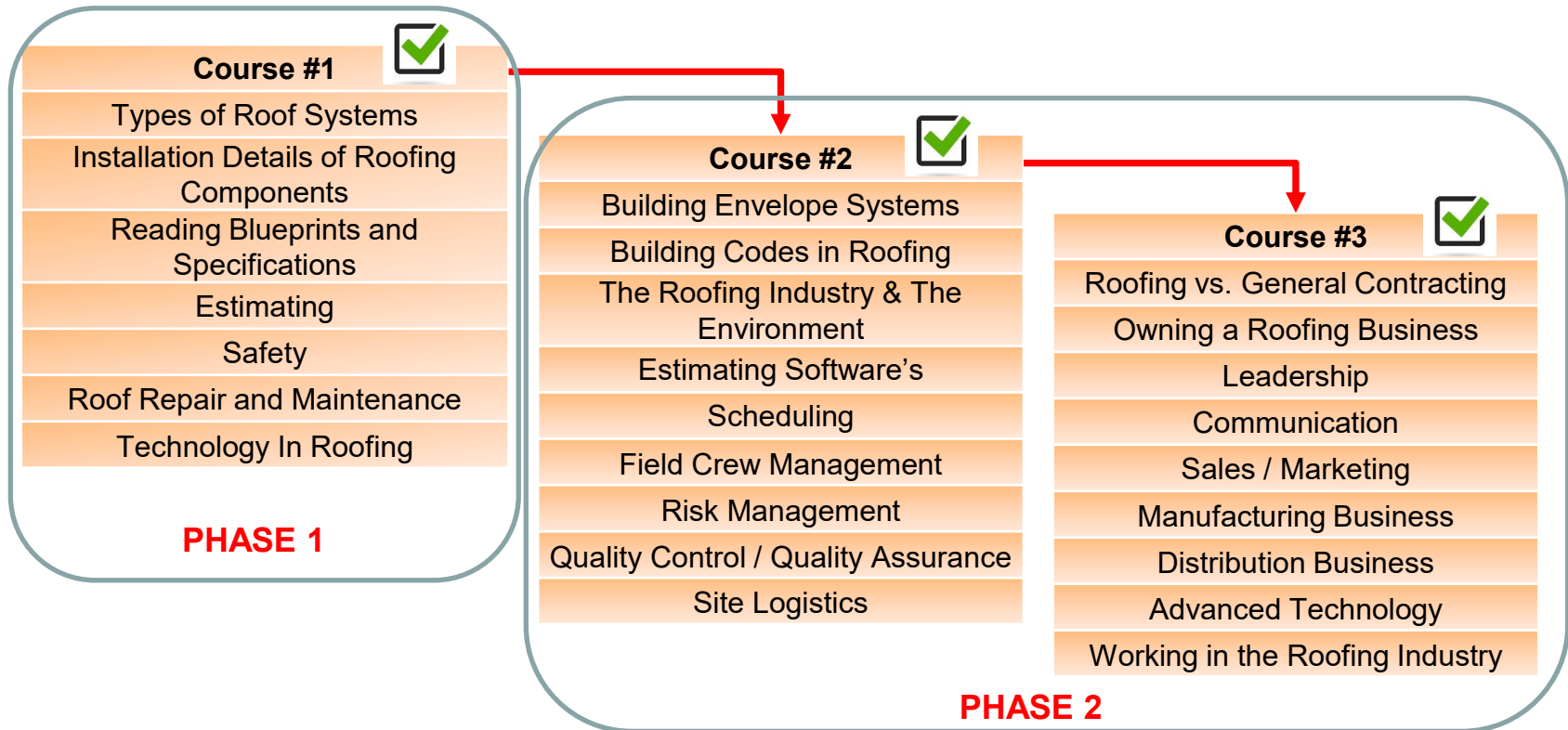
Objective

Educate Workforce About
the Roofing Industry
(Attract & Retain)

Approach



Course / Manual Layout



Phase 1 & Phase 2 – Roofing Courses



Success So Far....

- Total Students: **325 students [23 students enrolled this semester]**
- Total Industry Guest Speakers: **52 Different Companies**
- Favorite Course Aspects
 - Industry Professional Involvement
 - Topics covered in the course
 - Course layout [lecture + assignment]
- Overall Satisfaction: **9.2 / 10 [Survey]; 4.5 / 5 [University Evaluation]**
- Roofing Certificate [College Students]
 - Clemson University: State-Approved Graduate Certificate Program
 - The Roofing Alliance: Industry-recognized certificate
- Other schools adopting the curriculum [ASU, A&M, Cal Poly, CSU, Bradley, etc.]

Success So Far....

- Enjoyed this course. We got a great, thorough overview of roofing and the roofing industry.
- It is a great course and I loved to understand the roofing industry and am very excited to start a career in the roofing industry.
- It is indeed **an excellent course**. It could have been a very serious and tedious topic but the way the course is planned, makes us think to search around for answers which is exciting and fun to do. Learning is not just by listening, I got a chance to **engage with the topics covered through assignments and the project work**. It actually motivates and equips us with the right knowledge and the quality for doing a startup roofing business. **Kudos to** our Professor and **the professionals of the roofing industry people**.
- **Great experience** due to **collaboration between industry experts and the instructor**. Thank you!

Success So Far....

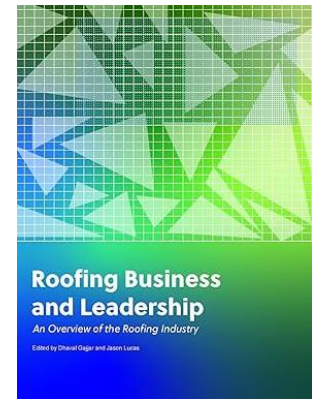
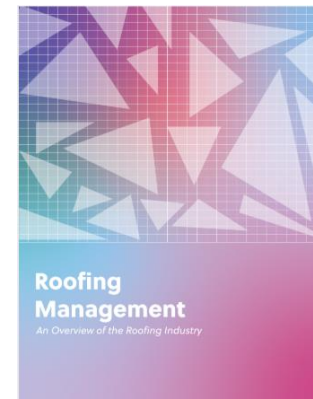
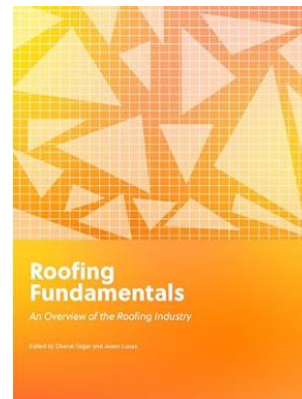
- This is **an awesome class**. It has been **my favorite since starting my degree** a year ago.
- My **overall experience** in the roofing course was **great!** The class is **well organized** and the work is actually relatable to what is being taught. This class is the **only one that gives students a look into the subcontracting side of construction** while others focus more heavily on project manager type of positions. It shows people that there can be **another route taken that could still lead to higher positioning**.
- I thought this **class was great**, definitely need more trade classes in Clemson. The only complaint I would have is that the class is very long especially if you have a class before.
- Thanks for the **exposure to keynote speakers and detailed roofing instructions and their execution**. It's always great to learn from you, Dr. Gajjar.
- I really **enjoyed this class** this semester. I hope to be able to **take more roofing classes** in the future.
- Other trade specialization course need to be implemented into the program, this was an **extremely valuable course** and by **introducing students to more trades**, more job opportunities will open up and more **kids will move into sub management** and maybe even start their own business. It was great.

Phase 3 - Roofing Manual

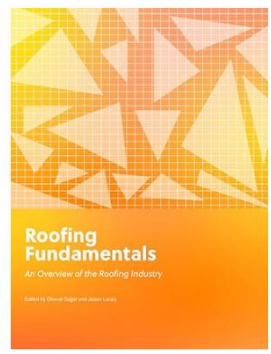


Roofing Manual

- Roofing Manual
 - Support the developed roofing certificate program
- All three sections complete
 - Task Force Review
 - Guest Professional Review
 - NRCA Technical Review
 - Clemson University Review



Books > Crafts, Hobbies & Home > Home Improvement & Design > How-to & Home Improvements > Roofing



Roofing Fundamentals

by Dhaval Gajjar (Editor), Jason Lucas (Editor)

Roofing Fundamentals is an overview of all major roofing functions, components, and processes. This serves as an overview of the industry and how it functions. The text was compiled by over 10 industry professionals and reviewed by Clemson University staff and the NRCA for technical content. The material in this text supports the content of the university course Principles of Roofing as well as the professional development course Roofing Fundamentals.

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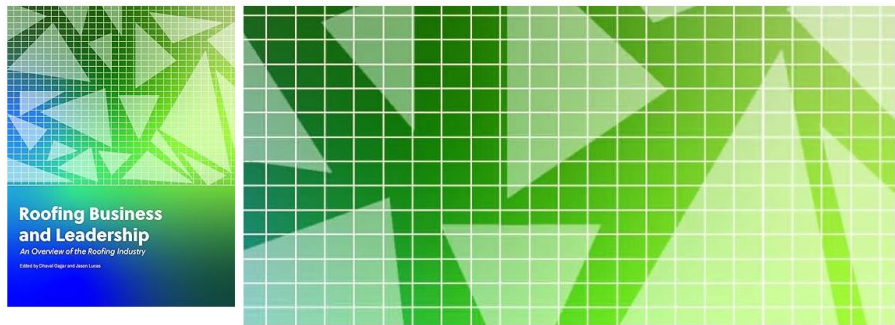
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Phase 3b - Professional Development

March 2025



Professional Development Training

- Roofing Professional Development [Industry Professionals]
 - Curriculum available to ALL industry professionals
 - No prior education needed!!!!
 - 8 hrs. of roofing management education
 - Fully online [can take up to 60 days]
 - Clemson University and The Roofing Alliance Joint Certificate
- Available Courses
 - Roofing Fundamentals
 - Roofing Management
 - Business / Leadership





Roofing Fundamentals

In this self-paced, online course, participants will be provided with a descriptive study of roof construction, focusing on the nomenclature, building materials, estimating, safety, technology, and assembly of roofing systems.



Time limit: 60 days
\$795



Roofing Management

This online course offers a descriptive study of roof construction, focusing on building function, building codes, scheduling, risk management, field crew management, quality control and the assembly of different roofing systems.

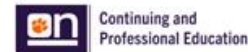


Time limit: 60 days
\$795



Roofing Business and Leadership

This online course offers a descriptive study of the roofing industry, focusing on the business aspects of managing and sustaining a roofing company.



Time limit: 60 days
\$795



Feedback So Far....

Criteria	Overall (out of 5) n = 308
This class was well presented. The material was relevant, easily understood, and flowed well	4.25
This class provided me with a better understanding of the roofing industry	4.62
This class has furthered my knowledge and will help me move forward with my career	4.48
I would feel confident in recommending this class to my co-workers and other members of the industry	4.32
The value of this class appropriately matches the cost and time dedication	4.00
The online course was easy to access	4.79
The online classroom was easy to navigate	4.76
There was adequate information about how to get help or technical support	4.53
The online course had a nice look and feel	4.44

Phase 4 - Sustainability & Resiliency (S/R) Initiatives



Study Objectives

- Objective #1: Holistically document the current state of the various sustainability and resiliency efforts in the roofing industry
- Objective #2: To develop and implement professional development training modules to educate the roofing industry professionals regarding roofing sustainability and resiliency
- Objective #3: The developed training modules will also be incorporated into the current roofing curriculum as a three-credit roofing course with the aim of developing a **“roofing minor”**

Sustainability

Proximity
Renewable energy
Waste recovery
Maintainability
Reuse
Social stewardship
Waste reduction
Material sorting
Preventive maintenance
Incorporate recycled content
Environmental stewardship
Reduced emissions
Process Improvement

Resiliency

Inspections
Ability to withstand environmental condition
Recovery
Preparedness
Design to accepted standards
Installation methods
Continuity plans
Operations
Post-disaster mobilization
Increased durability
Stocking extra materials
Software and tools
Lifecycle cost
Repairability

Long-lasting
Recycling
Energy Efficiency
Repairability
Quality
Warranties

Fourth Course Sustainability & Resiliency in the Roofing Industry

- Offered Last Semester
- 24 Students Enrolled
- ROOFING MINOR
COMING SOON!!!!
- Professional Development
& Distribution (Early 2026)

Course #4
Introduction to S/R
Raw Material Extraction and Procurement
Manufacturing and Production Process
Distribution and Supply Chain
Construction and Installation
Post-Construction Performance and Maintenance
Life Cycle Assessment
Environmental Quality and Well-Being
Innovations in S/R
Market Drivers, Training and Certifications
Challenges, Future Trends and Technology in S/R

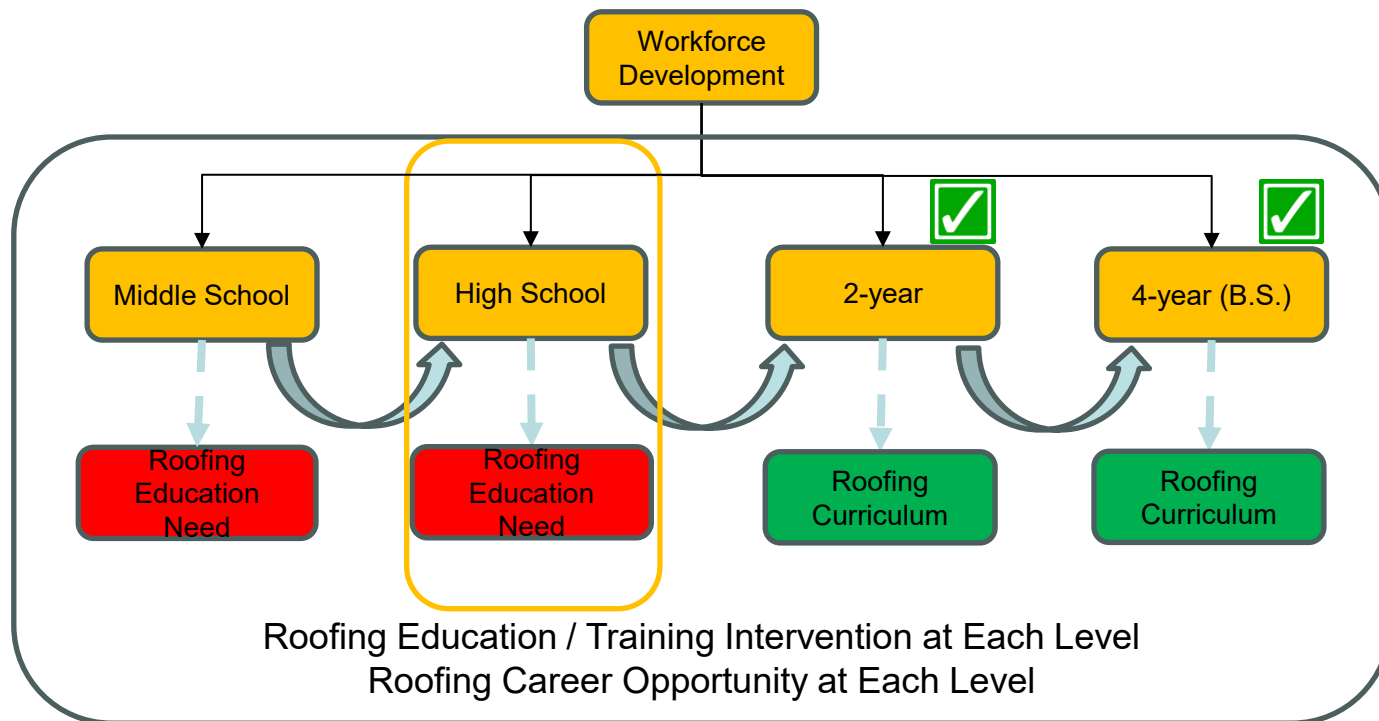
Center for Roofing Innovation and Leadership

VISION: Advancing roofing innovation, leadership, and sustainability through academia and industry collaboration

MISSION: The Center for Roofing Innovation and Leadership elevates the roofing industry and its vital role in the built environment by driving workforce development, fostering leadership and industry best practices, spearheading transformative research, and cultivating the next generation of roofing professionals

Scope of Work from the Roofing Alliance Funding Immediate Focus

- High school and middle school outreach
- Support and expand the roofing professional development training
- Existing roofing curriculum and manual
- A roofing center facility (modular building and deck)
- Strategic hire to support the Center's education and research initiatives



High School Outreach Types

Experiential

- Boot Camp Days
- Summer Camp Week

Module Based

- Simulation
- Multimedia

Experiential Content

Team Building

Communication

Career Path Awareness

Skill Exposure

Management Skills



INVEST IN THE FUTURE OF ROOFING TALENT! *High School Bootcamp*

Shape the next generation of skilled professionals through **one-day, hands-on Construction Bootcamp**. This immersive event introduces participants to the construction industry, highlights career pathways, and provides an **industry-recognized roofing certificate**—a first step toward a rewarding career.

The one-day bootcamp focuses on:

- **Interactive activities:** Communication and team-building challenges, planning and scheduling exercises, and career exploration workshops.
- **Hands-on learning:** A roofing skills clinic led by experienced professionals.
- **Direct industry engagement:** Opportunities for participants to connect with employers and learn about high-demand roles.

The bootcamp will not only promote workforce development but also position your organization as a leader in building the future of construction.

Partner with us to inspire, educate, and empower tomorrow's workforce!

Cost Breakdown:

Total of \$10,000 to host one Bootcamp:

- \$3,000 - Breakfast, Lunch, Snacks, and Drinks
- \$500 - Printed materials (signage, certificates, etc.)
- \$250 - Supplies for learning activities
- \$3,000 - T-shirts, tote bags, registration materials
- \$1,250 - Miscellaneous (give-aways, student gifts, etc.)
- \$2,000 - Travel for the Center personnel

Additional Expenses:

- supplies for hands-on learning activity
- fees for facility use/insurance, etc., unless the event is held at a local high school during school time.

Can Be Replicated In
Any Region.....

One Day Roofing Camp

UNITS AND TOPICS

UNIT 01: CONSTRUCTION INDUSTRY OVERVIEW AND CONNECTION TO ROOFING

UNIT 02: ROOFING INDUSTRY BREAKDOWN

UNIT 03: SAFETY CULTURE IN ROOFING

UNIT 04: ROOFING INNOVATION AND SUSTAINABILITY

UNIT 05: ROOFING MATERIALS

UNIT 06: ROOFING SYSTEMS

UNIT 07: PROBLEM SOLVING

UNIT 08: CAREERS IN ROOFING, PROGRESSION, PERSONAL GROWTH

FINAL: ROOFING CONTENT OVERVIEW

WHAT ARE THE OTHER NEEDS FOR THE INDUSTRY?



What Curriculum Is Available? Safety High School Technical Course Parents Perception Video Games
 Innovation Sustainability / Resiliency Recycling Performance Management
 Aging Population Problem Solving Solar/Green Roofing Think Tank Data Analytics Roof Asset Management
 Mental Health Career Progression Ergonomics Roof System Value Reintegration
 CEUs Training Technical Courses Craftside Gaps AI in Roofing Branding
 Conflict Resolution Dirty Job Guy EQ Training Alignment Life-cycle
 Training Young Excellence Steep Slope Roofing Single Ply Roof Install
 One-Week Skill Program Proactive Middle Schol Career Collaboration Succession Planning
 Knowledge Transfer Perception Navigator Good Living Navigator Prep Leadership
 Technical Bootcamp Cross-Training Summer Camps Industry Awareness
 Sales Critical, specific mission Path to Programs Amplifier and Aspirational
 Details and Penetrations needs Energy Management Successful Business Models Worker Pipeline
 Technology (leaks) Best Practices PreK-12 Value-Based Leadership Online Courses
 School Board Involvement Adult Learning Continuous Improvement Hands-on Experience Benchmarking
 Military Vets Sub-contracting Labor

SO, WHAT IS THE FOCUS?



TOP RANKED CATEGORIES – TOP 4 FOCUS AREAS



Workforce Development & Training

- Leadership development
- Perception of the Roofing Industry
- Emotional Quotient (EQ) Training
- Collaboration
- Best Practices (Recruitment and Retention)
- Middle/High School Career Path Outreach and Training



Sustainability

- Lifecycle analysis of roofing systems
- Business models for sustainability and resiliency
- Energy management





Emerging Technologies



- AI and the Roofing Industry
- Advanced Energy Management Systems
- Leak Detection (without being on roof)
- Smart Materials for Roofing Systems



Employee Well-Being

- Ergonomic challenges
- Heat stress (environmental hazards)
- Other Trainings

 Workforce Development and Training
 Sustainability

 Emerging Technologies
 Employee Well-Being

QUESTIONS

