

# CENTER FOR ROOFING INNOVATION AND LEADERSHIP

# FALL 2024

## Meeting Report

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Summary report and meeting minutes from the inaugural meeting for the **Center of Roofing Innovation and Leadership at Clemson University**, an effort funded by the Roofing Alliance, for the industry, by the industry.

### October 29th

The Madren Conference Center  
@ Clemson University

*These meeting minutes are intended to be as brief as possible and do not attempt to record all the discussions during the meeting. These minutes do, however, contain a record of all decisions made and actions taken during the meeting.*

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# INTRODUCTIONS

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The meeting was called to order by Chairman Greg Bloom at 8AM Eastern.

In attendance were members from the Industry Steering Committee and the Clemson University team.



## **Roofing Alliance Team:**

Alison LaValey

McKay Daniels

## **Steering Committee Members:**

Greg Bloom, 2024-2025 Chairman

John Campbell

Piers Dormeyer

Reed Gooding

Sherri Miles

Kyle Thomas

Steve Little (Unable to Participate)

Greg Hudson

R.J. Radobenko (virtual)

Bill Good

## **Clemson University Team:**

Dhaval Gajjar

Padam Wagle

Vivek Sharma

Stuti Garg

Jason Lucas

Vijaya Ravi Prasanth Reddi



# SESSION OVERVIEW

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Dr. Gajjar commenced the meeting by thanking everyone for their time and support for the Center kick-off meeting at The Madren Conference Center, Clemson University.

Dr. Gajjar invited each participant to introduce themselves and share a good memory of their experience in the roofing industry.

Dr. Gajjar emphasized that the goal of the meeting is to establish a vision, mission and direction within the industry where the center intends to move forward with inputs from the steering committee.

Dr. Gajjar invited Alison LaValley, and she expressed the expectation that the steering committee would be in alignment with the leaders of the alliance. Alison LaValley introduced the steering committee, informing that the present committee chair is Greg Bloom and the next chair will be Reed Gooding. In the future, the past Chair of the Roofing Alliance will be the incoming Chair of the Roofing Center.

Alison LaValley invited Greg Bloom to share a few words. He expressed his gratitude for the support in securing the center's funding and shared his excitement about collaborating with the Clemson University team to advance their shared goals.

Dr. Dhaval Gajjar went over the meeting agenda for the day, which included

- o Center Strategic Discussion
- o Center Research Discussion
- o Experiential Learning (XL Yard) Tour
- o Center Training/Education Discussion
- o Next Steps





# 02 STRATEGY



## TEAM

Dr. Gajjar - Center Director  
Dr. Lucas - Education and Outreach  
Dr. Sharma - Research

Dr. Gajjar kicked off this session by emphasizing the importance of collaboration between academia and industry. He introduced Dr. Vivek Sharma and Dr. Jason Lucas, whose expertise in roofing industry research, center operations and online education will ensure the Center's success. He highlighted the goal of establishing a name and identity for the center, drawing on past experiences and partnerships in the construction industry.

Dr. Gajjar discussed what a Center is and how the Roofing Alliance, Clemson University and the Center would work collaboratively to address roofing industry needs.

Dr. Gajjar outlined the center's location, initial mission and vision, emphasizing core values like inclusion, innovation, and transparency. The roofing center's focus will be to support industry needs through the development of programs and applied research initiatives by establishing a dedicated roofing education and research facility within Clemson's CSM Experimental Learning (XL) yard on the West Campus.

Dr. Gajjar highlighted the progress made over the past six years between the Roofing Alliance and Clemson University partnership, which includes roofing courses, a professional continuing education program, a roofing manual, and a sustainability and resiliency study. It was also emphasized that the courses have increased student interest in roofing and have generated funds for the Roofing Alliance. The initiatives already established make an excellent foundation for forming a new Center.

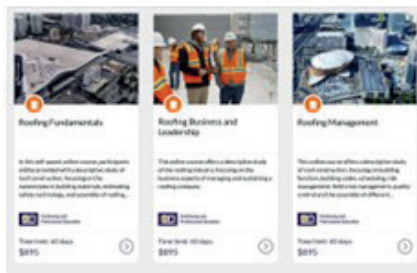
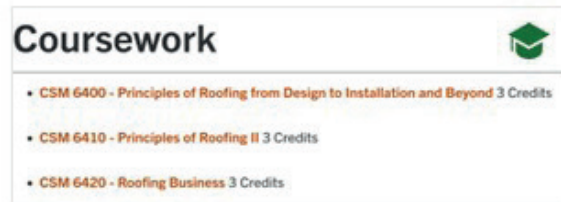


# PAST COLLABORATION

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## Collegiate Coursework



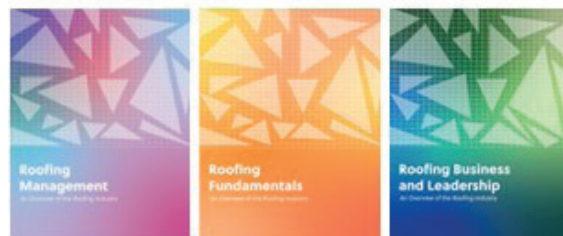
## Sustainability and Resiliency in Roofing



## Professional Development



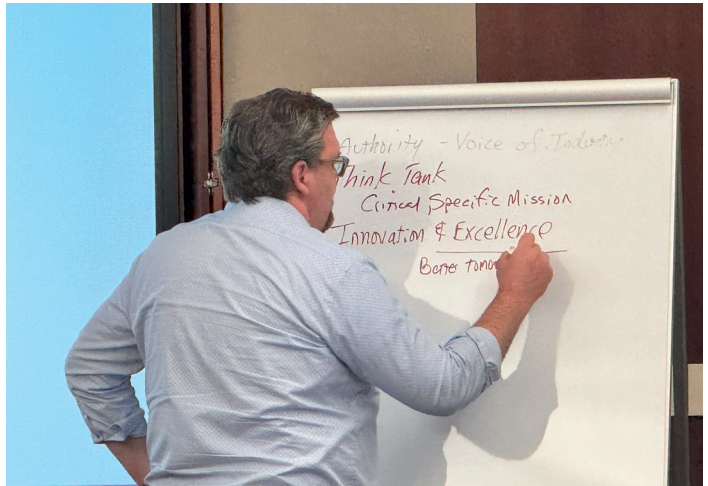
## Instructional Manuals



## Industry Reports



# WHO WE ARE



Dr. Sharma then invited the members for an open discussion regarding the role of the Center within the roofing industry. The question of “who we are” as a Center was discussed. The main takeaways about who we are:

## Authority

Voice for the Industry

## Think Tank

## Innovation

## Continuous Transformation

## Collaboration

for good of industry

## Amplifier

## Critical

Specific Mission

## Proactive

## Excellence

## Navigator

energize towards goal

## Leaders and Problem Solvers

## Aspirational

## Branding of the Industry

by providing purpose and impact



# NAMING THE CENTER

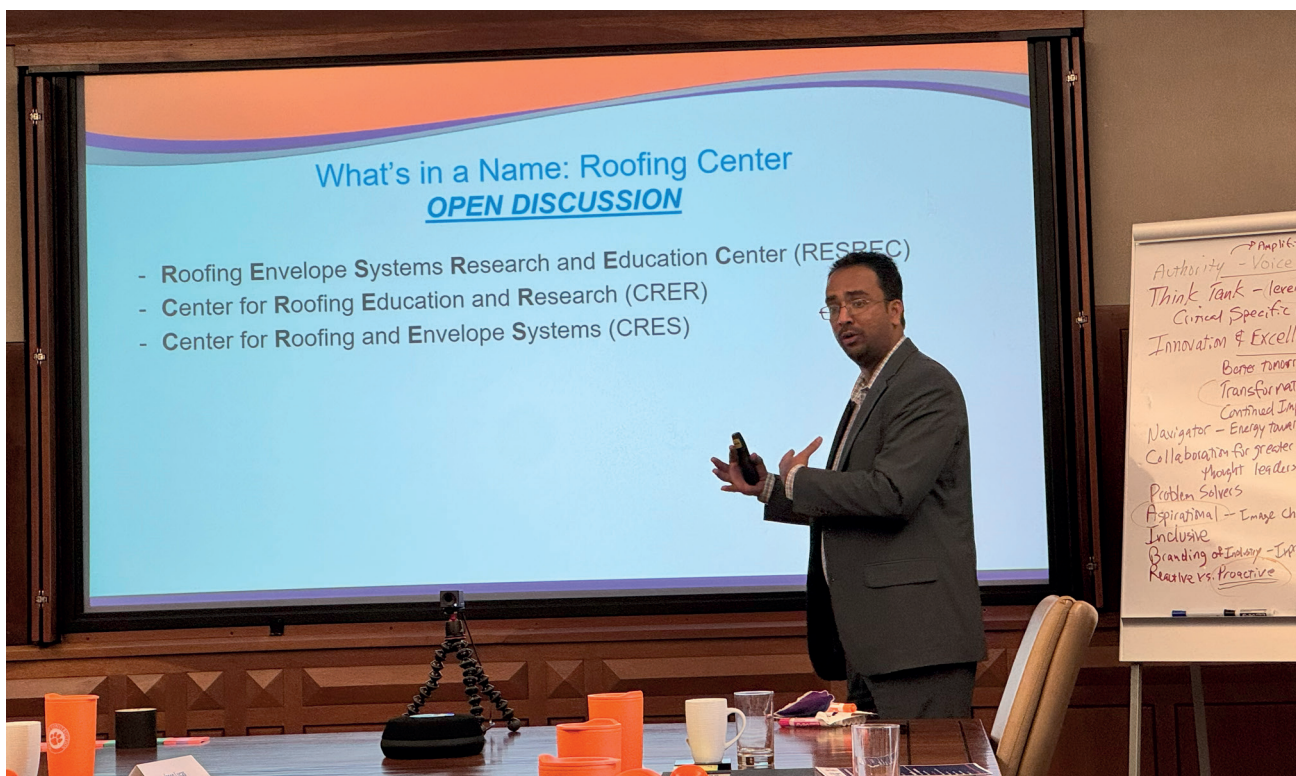
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WHAT WORDS DO WE NEED TO INCLUDE?  
WHAT MESSAGE DO WE WANT TO CONVEY?

Dr. Gajjar introduced a few options for naming the Center and called for another open discussion to officially name the roofing center.

The members unanimously voted to name the roofing center:

## CENTER FOR ROOFING INNOVATION AND LEADERSHIP





# VISION

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After the open discussion, Alison LaValley suggested that the vision of the Center needs to be re-visited and addressed.

The Steering Committee members engaged in an open discussion to formulate the vision of CRIL. There were a few options proposed for the vision. It was identified that the vision of CRIL needs to stand alone and differentiate itself from the Roofing Alliance. The “industry-academia” partnership was identified as the key differentiator. Below are the vision statements that were identified and generated during the brainstorming session:

After discussion and voting, the new Vision of CRIL was identified as **“Advancing roofing innovation, leadership, and sustainability through academia and industry collaboration.”**

**“Advancing roofing innovation, leadership,  
and sustainability through academia and  
industry collaboration.”**



# 03 RESEARCH

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Dr. Sharma initiated the Roofing Center research discussion by defining what “research” means for the roofing industry. It was discussed how the word research means “solving industry problems.” In other words, the motto for CRIL is “by the industry for the industry.”



Dr. Sharma also discussed the importance of research via the Center in terms of the bottom line and the value added. He emphasized that the idea is to engage in research meaningful for academia and industry with the overarching intent to improve the bottom line – improve the industry. The power of communication is undeniable, and when supported by robust data, studies and findings - research becomes meaningful.

Dr. Sharma added that moving forward, a vital focus of the sustainability plan is to extend beyond the foundational funding over the next three to four years. To achieve this, leveraging industry partnerships is a must to secure federal and state funding and support from various foundations. By engaging these stakeholders, targeted research can be conducted that aligns with the priorities of the roofing industry.

It was also discussed that the Roofing Alliance is the founder/seed investor of CRIL, with Clemson University team, the new hire for CRIL, graduate assistants and the industry partners as key stakeholders. As part of the sustainability plan, research will be undertaken to secure funding, which will enable the expansion and build upon the efforts of the roofing center.

Dr. Gajjar added that research implies solving industry problems backed by data encompassing various aspects, including workforce development, Pre-K-12 education, industry professionals, retention and any other issues/challenges the roofing industry needs solutions to.



# HEAD START

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Dr. Gajjar also highlighted that **the Roofing Center has secured the first funding (in the amount of \$15,000) via the DeWalt Foundation** and said the work has already started to generate funding from various sources. Dr. Lucas said that the funding will be used to host “roofing field day” for targeted high school students. The focus of the day will be roofing career exploration, basics of the roofing industry, communication skills and project management.

# CENTER SUSTAINABILITY

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Dr. Sharma highlighted the value add of the research is going to be objective and unbiased with the mission of advancing knowledge. He also added that transparency is another important aspect in relation to the data and assured that the data collected and stored at Clemson University are protected by Federal and State regulations. This ensures the trust and safety of information. Lastly, peer review will also add value to the research component.

Dr. Sharma also highlighted that **CRIL is building upon the existing Roofing Alliance – Clemson University Partnership**, including the roofing courses taught, economic study, professional development, manual/textbooks, sustainability/resiliency research, and many more.

Committee Chair Greg Bloom shared his experience working together with Clemson University and praised the efforts of Alison LaValley and Dr. Gajjar at Clemson in introducing and increasing the roofing curriculum to students.

Greg Hudson added the importance of sustainability and resiliency research currently ongoing at Clemson University and the value of research.

There was also discussion on the future vision and expansion, consisting of executive, leadership, and strategic planning committees that provide further direction to research and education.





# BREAK-OUT

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Dr. Sharma invited the members for an open discussion to identify the research focus area from the manufacturer's, contractor's and distributor's perspective.

A breakout session was conducted amongst the Steering Committee members of each sector. Following the breakout session, an engaging discussion was conducted by discussing the findings of each breakout group with the primary goal of identifying focus areas of research in the roofing industry.





# FOCUS AREAS

01

## MANUFACTURERS

- Recycling, post-consumer recycling
- Clean data repository
- Asset management of roof
- Collaboration
- Value of roof system/assets

02

## DISTRIBUTORS

- Beyond Clemson University courses –Technical Know-How?
- Aging Population
- Training young
- Knowledge Transfer
- Data Clearinghouse

03

## CONTRACTORS

- Leak detection (without being on the roof)
- Adult Learning
- Upskill
- Practical Application of Systems
- Ergonomics
- Safety
- AI and the Roofing Industry (Awareness/Benefits)
- Recycling of materials
- Life-cycle of roofing systems
- Transfer workforce
- Leadership development
- Succession planning
- Alignment across the supply chain

04

## INDUSTRY WIDE

- Perception of the Roofing Industry
- Emotional Quotient (EQ) Training
- Worker Pipeline
- Data Analytics
- Benchmarking
- Business Models for Sustainability and Resiliency
- Energy Management
- Path to roofing programs (pre-cert, SkillsUSA, etc.)
- Best Practices (Recruitment and Retention)
- Safety
- Hands-on Experience and Training
- Sub-contracting Labor Force
- High School Outreach







# XL YARD

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The members visited the Construction Science and Management Experiential Learning Yard (XL Yard) to tour the existing facilities and see the roofing center's proposed facility.

Dr. Gajjar briefed everyone about the ongoing efforts at the XL Yard, such as different courses, research, and hands-on learning.

Dr. Gajjar discussed the proposed location and the facility for CRIL. The facility will comprise a double-wide modular building and a small demonstration deck (not a brick-and-mortar building). This modular building is similar to the one already had at the XL Yard. The modular building and the deck will be used for educational and research purposes.







# EDUCATION

Dr. Lucas initiated an open discussion regarding the training types/format, professional development education and outreach to middle/high schools.

A breakout session between the Steering Committee members consisting of each sector was conducted. Following the breakout session, an engaging discussion was conducted by discussing the findings of each breakout group with the main goal of identifying focus areas of training and education in the roofing industry.





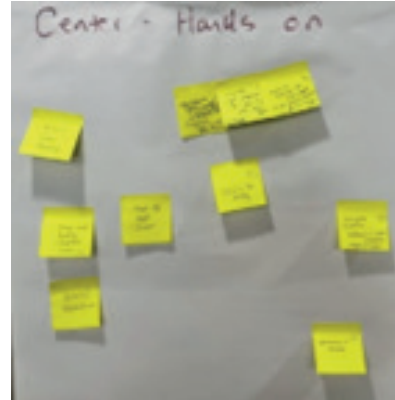
# FOCUS AREAS

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01

## HANDS ON

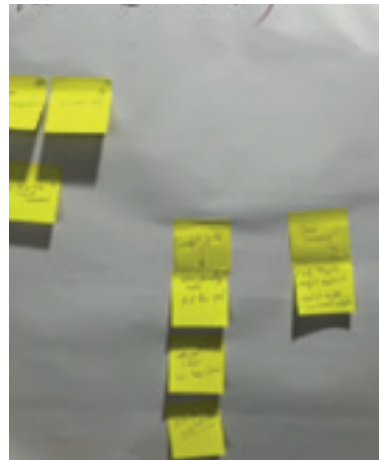
- Solar/green roofing
- Steep slope roofing (asphalt, metal, tile)
- Single Ply roof install
- Details/Penetrations
- CEUs for training
- Industry Awareness
- Established one-week programs for specific skill set
- Technical boot camp for sales people
- Online course - hands-on



02

## ADULT LEARNING

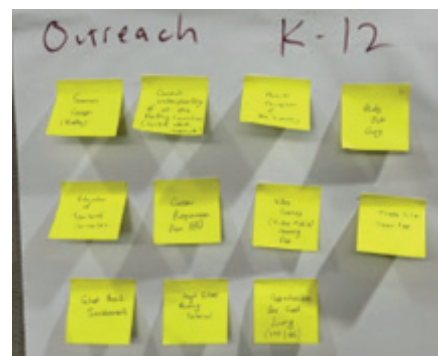
- Identify what interests them.
- Military vets
- Reintegration
- Craft side - what already exists, find the gaps
- Cross training
- Communication
- Performance Management
- Conflict resolution
- Mental Health
- Value-based leadership



03

## PREK-12

- Summer camps (roofing)
- Education of teachers/counselors
- School board involvement
- Current understanding of all roofing curriculum
- Career progression from HS
- Technical Course for high school
- Parents' perception of the industry
- Video games (virtual modeling learning app)
- Opportunities for good living
- Dirty job guy involvement
- Middle school career prep





# CENTER SUPPORT

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Dr. Lucas continued the session with the discussion on the new hire for CRIL that is already a part of the budget.

Open discussion as focused on the requirements and qualifications of the new hire. The key takeaways for this position are:

- Attitude – willing to learn
- Well-rounded
- Logistics/organizational skills
- Facilitator
- Roofing industry experience/familiarity
- Virtual/online + in-person familiarity/comfort

It was also discussed that contractors might not send their employees for training due to budget and logistics. However, there is still a need for some hands-on training.

It was identified that further discussion is needed to identify the responsibilities and the job function for this position. A separate virtual meeting will be held to discuss the use of this new hire further.

The Clemson University team will develop a draft job description and list of responsibilities for future discussion based on the outcomes of the meeting.

## **Job Description: Training and Outreach Coordinator at Clemson University's Center for Roofing Innovation and Leadership**

**Position Title:** Center for Roofing Innovation and Leadership – Training and Outreach Coordinator

**Location:** Clemson University, Clemson, SC

**Position Overview:** The Center for Roofing Innovation and Leadership at Clemson University seeks a motivated and knowledgeable individual to join our team as a Full-Time Employee. This role will support the center's mission to advance the roofing industry through innovation, education, and collaboration. The ideal candidate will have strong organizational and communication skills, an in-depth understanding of the roofing industry, and the ability to facilitate virtual and in-person training sessions.





# NEXT STEPS

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Alison LaValley and Bill Good discussed the various initiatives to raise awareness and funding for CRIL for seed investment.

Anonymous donors will be making an announcement at the Roofing Alliance Nov 2024 meeting to encourage others for funding.

Bill Good discussed that a champion from the Steering Committee is needed to raise funding for CRIL.

Dr. Gajjar discussed CRIL's timeline for the next three years and the immediate next steps.

As part of the seed investment from the Roofing Alliance, below are the immediate next steps included in the proposal.

Start developing middle school and high school roofing curriculum

- Hire Ph.D. student for CRIL
- Finalize the new hire roles and responsibilities to coordinate the education efforts for CRIL
- Facility and deck

The goal of the first year is to have all the personnel and CRIL's direction in place.

Dr. Gajjar proposed that a regular quarterly meeting will be held with the Steering Committee with one in-person meeting a year.

Grants submitted for center support:

1. Dewalt Foundation - High School Outreach
2. National Science Foundation (NSF) K-12 - Project REACH





# THANK YOU

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## Report Prepared by:

Padam Wagle, Graduate Research Assistant

Dr. Dhaval Gajjar, Center Director

Dr. Vivek Sharma, Director of Research

Dr. Jason Lucas, Director of Education and Outreach

