

Risky Business: Why Every Builder Needs Quality Assurance?



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Thank You to Our Hosts & Partners!



Aaron Smith is the CEO of the [Energy and Environmental Building Alliance \(EEBA\)](#) which represents a community of over 50,000 builders and their stakeholders across North America that are truly the early adopters and innovators in driving sustainable transformation of the homebuilding industry.



Ed Caldeira is the Founder and CEO of [FTQ360](#) which has implemented customized quality and safety management systems for hundreds of general contractors, subcontractors, suppliers, inspection agencies, and insurance companies.



Donation Giveaway!

Participate in this brief survey to tell us more about your work for a chance to give back to one of three organizations:

- HomeAid Colorado
- Colorado Homebuilding Academy
- Local Food Bank of Choice

One entry will be selected at random at the end of today's webinar. EnergyLogic will donate \$75 on behalf of the winner!



Building Is a Risky Business!



- Getting land
- Getting funds
- Getting a buyer
- Getting a permit
- Getting it built
- Getting it through warranty

Photo Credit – Nathan Kahre



What Issues Stand in the Way of Profitability?

Schedule
Delays

Re-Work

Inability to
Scale

Warranty
Repairs

VPOs

Rising
Construction
Costs

Lawsuits



How Much of a Super's Day Is Spent Responding to Problems?



Bottom Line: More Problems To Solve Means:

- Less homes a super can effectively manage
- Less time communicating with buyers
- Lower construction quality

What Leads to These Issues?



Can We Solve This Problem?

There are two different mindsets to adopt.

Always Been This Way, Always Will Be

- Housing is unique
- Last major site-built product
- Growing number of trades

Solving Problems is in Our Blood

- Operate like the best supers

What Happens If?

We accept the status quo.

It Will Get Worse

- Trade shortage is not going away
- Aging trades and supers
- Material prices continue to rise

It Will Impact the Bottom Line

- Build times will stretch
- Warranty costs will go up
- Customer satisfaction will go down
- Risk increases
- Eroding margins

What Does a World With First Time Quality Look Like for You?

In the Field

- Less time spent managing re-work
- Smooth predictable construction process
- A quality-built home

In the Office

- Reduced warranty costs
- Staying on budget
- Reduced risk

How Do We Get There?

- Another inspection?
- Another checklist?
- Another home punch?

All of these are reactive, NOT proactive!



Construction Safety Inspection Form

Name (print):				Phone:				ORG Code:			
Building/Location:				Date:							
Item	Yes	No	N/A	Fixed Date	Item	Yes	No	N/A	Fixed Date		
Program Administration					Material Storage/Handling						
OSHA Posting					Materials properly stored/separated						
Emergency numbers/contacts posted					Dust protection adequate						
Hazard Communication Program					Loads lifted correctly						
Daily/Weekly safety meetings held					Excavations & Shoring						
Housekeeping/maintenance					Shoring proper for soil & depth						
Work areas orderly					Adjacent structures properly shored						
Adequate lighting					Necessary ladders provided						
Hand washing/toilet facilities					Excavation barricaded						
Passage, entry & walkways clear					Spill on back at least 2 feet						
Clean work/resting area					Equipment away from edge						
Fire Prevention					Equipment ramps adequate						
Fire extinguishers available					Ladders						
Correct extinguishers for job					Ladders in good condition						
No smoking posted and enforced					Side rails extend 36" above landing						
Electrical/Utility					Scaffolding						
Electrical hazards posted					Proper for job & secure						
Drop cords protected					Ladders fully open when in use						
Underground electrical lines staked					Scaffolding						
Lockout procedures utilized					Equipment in good condition						
Access to breaker box clear					Scaffold is tied to structure						
Underground gas lines staked					Guardrails, top, mid, toe boards in place						
Hand & Power Tools					Connections sound & secure						
Hand tools in good working condition					Connections sound & secure						
Cords in good condition					Connections sound & secure						
All mechanical safeguards in place					Connections sound & secure						
Proper tools utilized for each job					Connections sound & secure						
Tools grounded or double insulated					Connections sound & secure						
Heavy Equipment					Personal Protective Equipment						
Operation manuals available					Proper personnel protection utilized						
Brakes, lights, signals & alarms operable					Fire extinguishers immediately available						
Wheels chocked when necessary					Personal Protective Equipment						
Seat belts worn					Headshots worn						
Daily inspections documented					Gloves available & used						
Barricades & Fencing					Personal Protective Equipment						
Site fenced					Steel toe footwear						
Roadways & sidewalks fenced					Eye protection utilized						
Floor openings planned or barricaded					Ear protection utilized						
Access/traffic controlled					Safety belts & lanyards utilized						
					Respirators & masks utilized						

Take a Cue From the Superintendent

1. Come across a problem.

2. Find out why the problem happened.

3. Make sure the problem doesn't happen again.

All together, this is a Quality Management System (QMS).



What's the Difference?

#1

Quality Control

Punching a home and correcting the identified issues.

#2

Quality Assurance

Identify recurring issues and prevent them from happening.

#3

Quality Management System

Business processes used to manage Quality Control & Quality Assurance



How Do the Best QMS's Work?

1. Inspect and correct.

2. Identify recurring issues.

3. Establish the root cause for the issues.

4. Implement solutions to eliminate the issue.



Step 1. Inspect and Correct

A good thing.

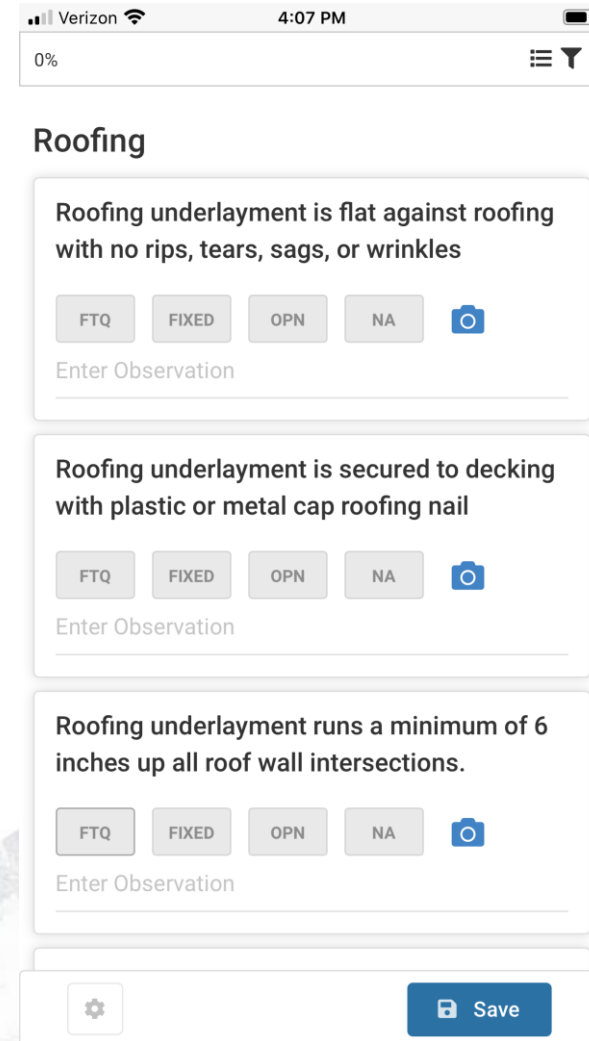
- We do this everyday.
- Is there a way to do it better?

What do we want?

- Data to help us make informed decisions.

How do we get it?


- Trained, qualified inspectors with standardized and scheduled inspections.



The screenshot shows a mobile application interface for a roofing inspection. At the top, the status bar indicates 'Verizon' and '4:07 PM'. Below the status bar, there is a progress indicator showing '0%'. The main content area is titled 'Roofing' and contains three inspection items, each with a description, a set of status buttons, and a camera icon.


Roofing

Roofing underlayment is flat against roofing with no rips, tears, sags, or wrinkles

FTQ FIXED OPN NA 


Enter Observation

Roofing underlayment is secured to decking with plastic or metal cap roofing nail

FTQ FIXED OPN NA 

Enter Observation

Roofing underlayment runs a minimum of 6 inches up all roof wall intersections.

FTQ FIXED OPN NA 

Enter Observation

At the bottom of the form, there is a settings gear icon and a blue 'Save' button.

Photo Credit – Nathan Kahre, FTQ360 Software

Step 2. Identify Recurring Issues

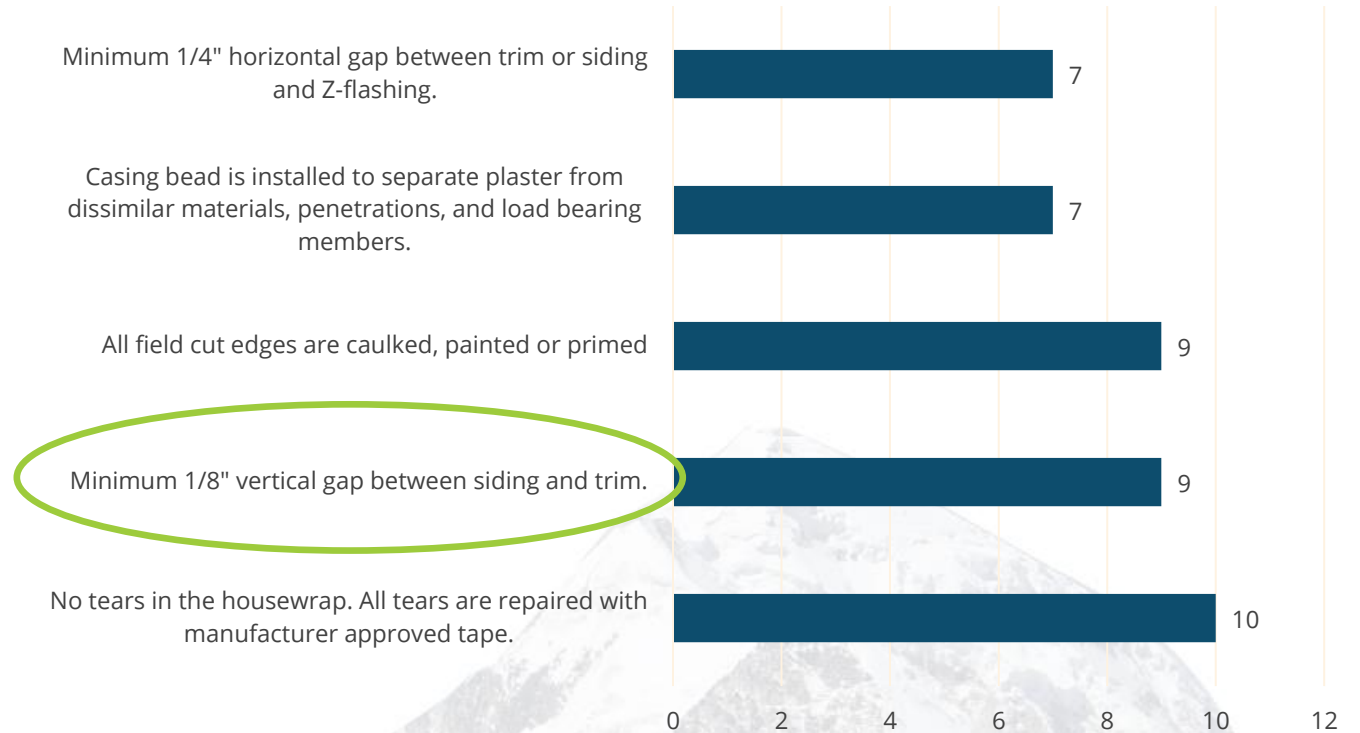
What's next?

- Analyze the data to identify and understand recurring issues.

Use the data:

- Not anecdotes
- Not loud superintendents
- Not gut reactions

Top Five Common Issues Q1 `



Step 3. Establish Root Cause

- Remember: This is construction not rocket science!
- Most of the time, root cause comes down to trade not knowing what is expected of them.



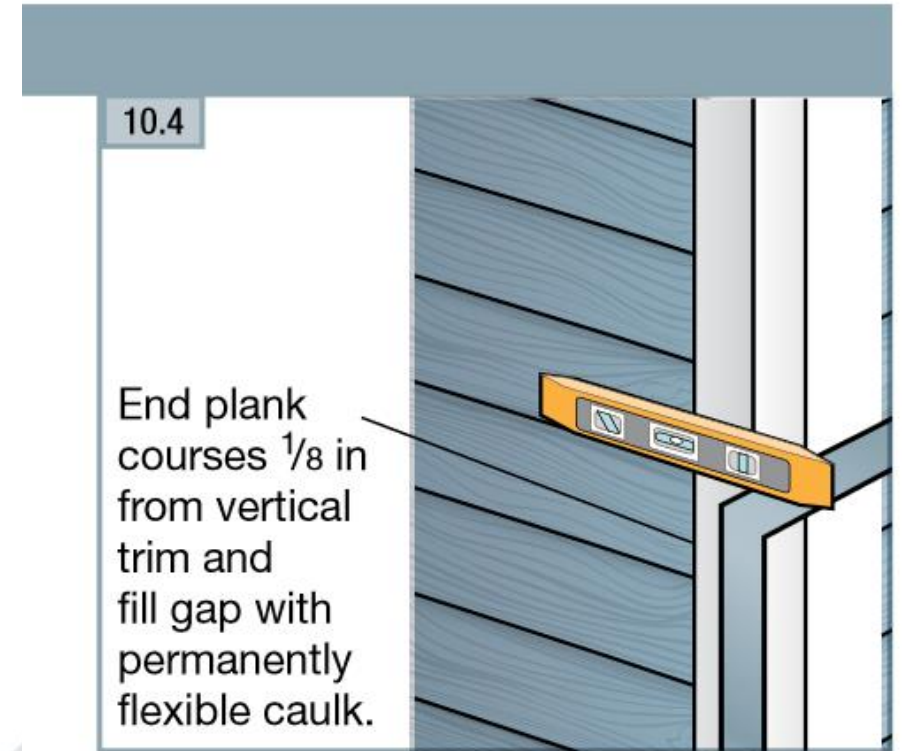
Photo Credit- Nathan Kahre

Step 4. Eliminate the Issue

Learn from our mistakes not make them repeatedly.

Use the tools available:

- Toolbox talks
- Construction documents
- Manufacturer installation instructions
- On-site training



Keep Doing It. One Bite at a Time.

1. Inspect and correct.

2. Identify recurring issues.

3. Establish the root cause for the issues.

4. Implement solutions to eliminate the issue.



Thank you! Questions?

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EnergyLogic

Our vision: A world where all homes are efficient, healthy, and resilient.

ENERGY STAR® Sustained Excellence/Partner of the Year 2009-2014, 2016-2020

About eEnergyLogic

EnergyLogic is an applied building science company that partners with building professionals to create better homes that are efficient, healthy, and resilient. We are based in Colorado and work worldwide.

