abaa 2026 building enclosure conference

Within Tolerance — Why IRL Cross-Collaboration Matters More in the AI Age

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BPL Enclosure

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Within Tolerance

Why IRL Cross-Collaboration Matters More in the AI age

Enrique Lizardi

I enable Developers, Designers, and Constructors to deliver high-performing assets by leveraging my unique perspective and collaboration approach to technical solutions proven by delivering successful projects domestically and abroad.

Learning Objectives

1. Team continuity = Enclosure continuity = High-Performing Buildings
2. Embrace the Red Flags
3. Keep the Feedback Loop going
4. Design + Construction + QA/QC redundancy = Long Term Service Life

MON
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Within Tolerance — Why IRL Cross-Collaboration Matters More in the AI Age

Leverage our differences to improve project communication

Proactively identify blind spots

Analyze how teamwork contributes to successful projects in the context of increasing AI integration

Apply collaborative strategies to effectively iron out details

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Current State

OWNER VS DESIGNER VS BUILDER

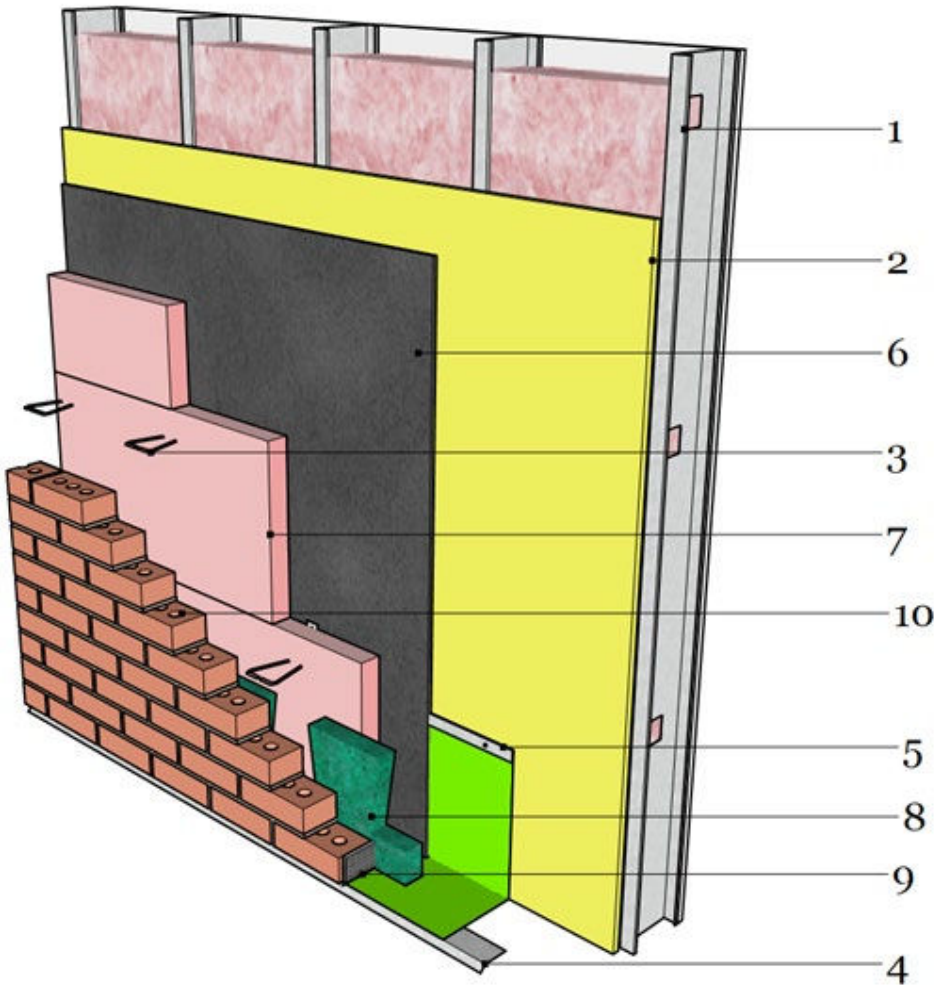
Today’s Roadmap

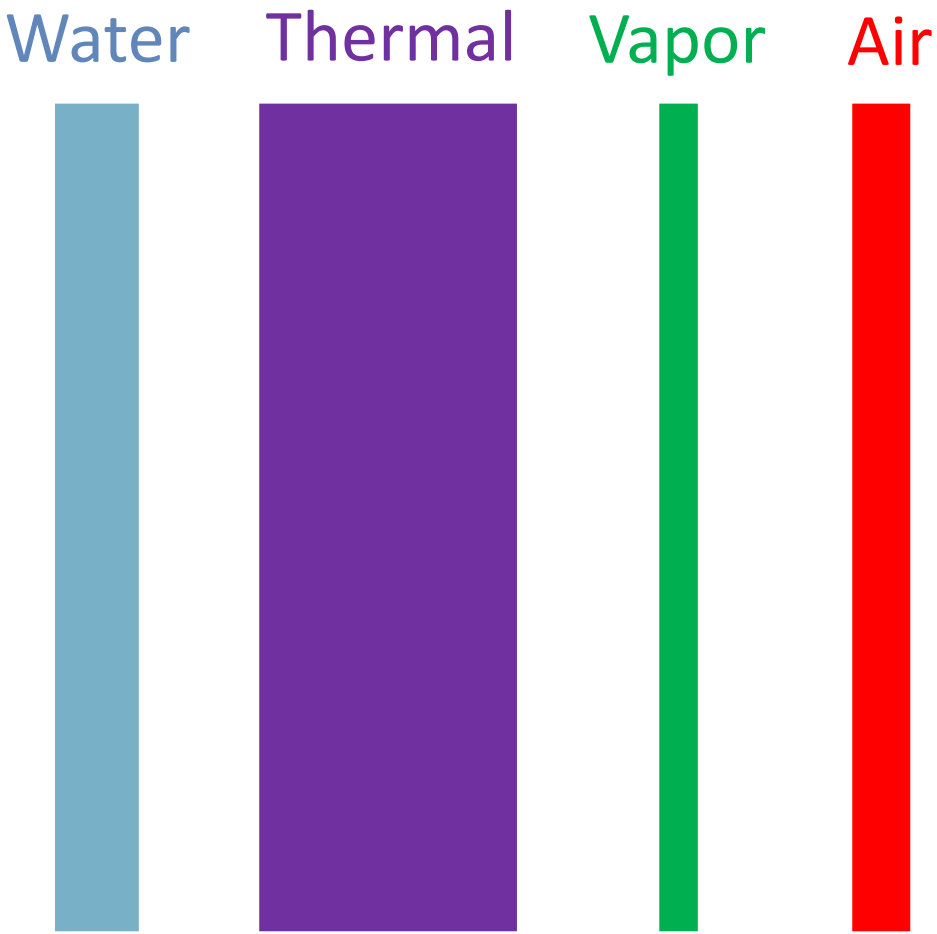
OWNER + DESIGNER + BUILDER

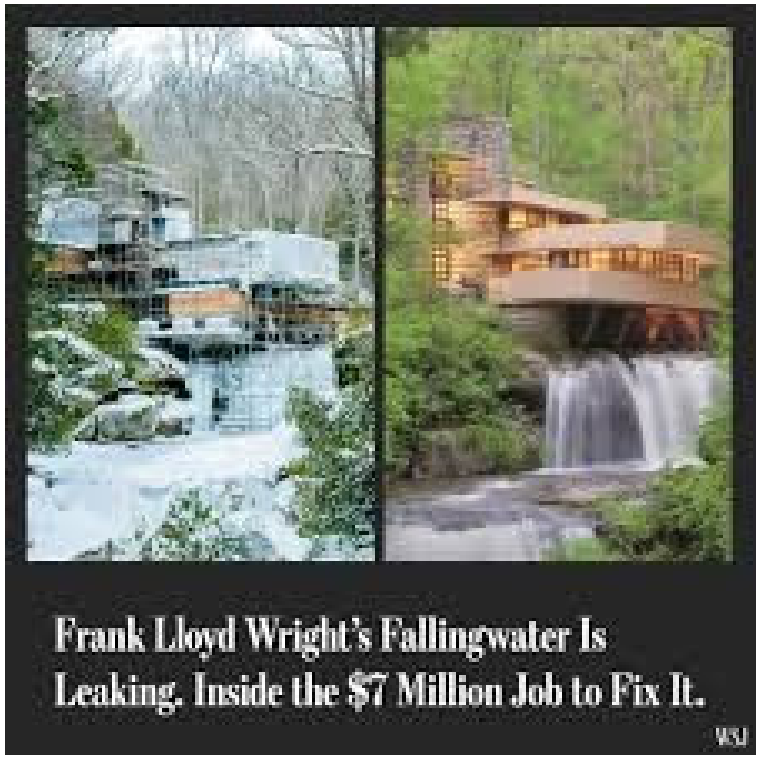
The New Complexity Landscape

- **Higher** performance **expectations** across all control layers
- More assemblies, more interfaces, more dependencies
- Compressed schedules = less margin for error

Continuity 101: Four Layers

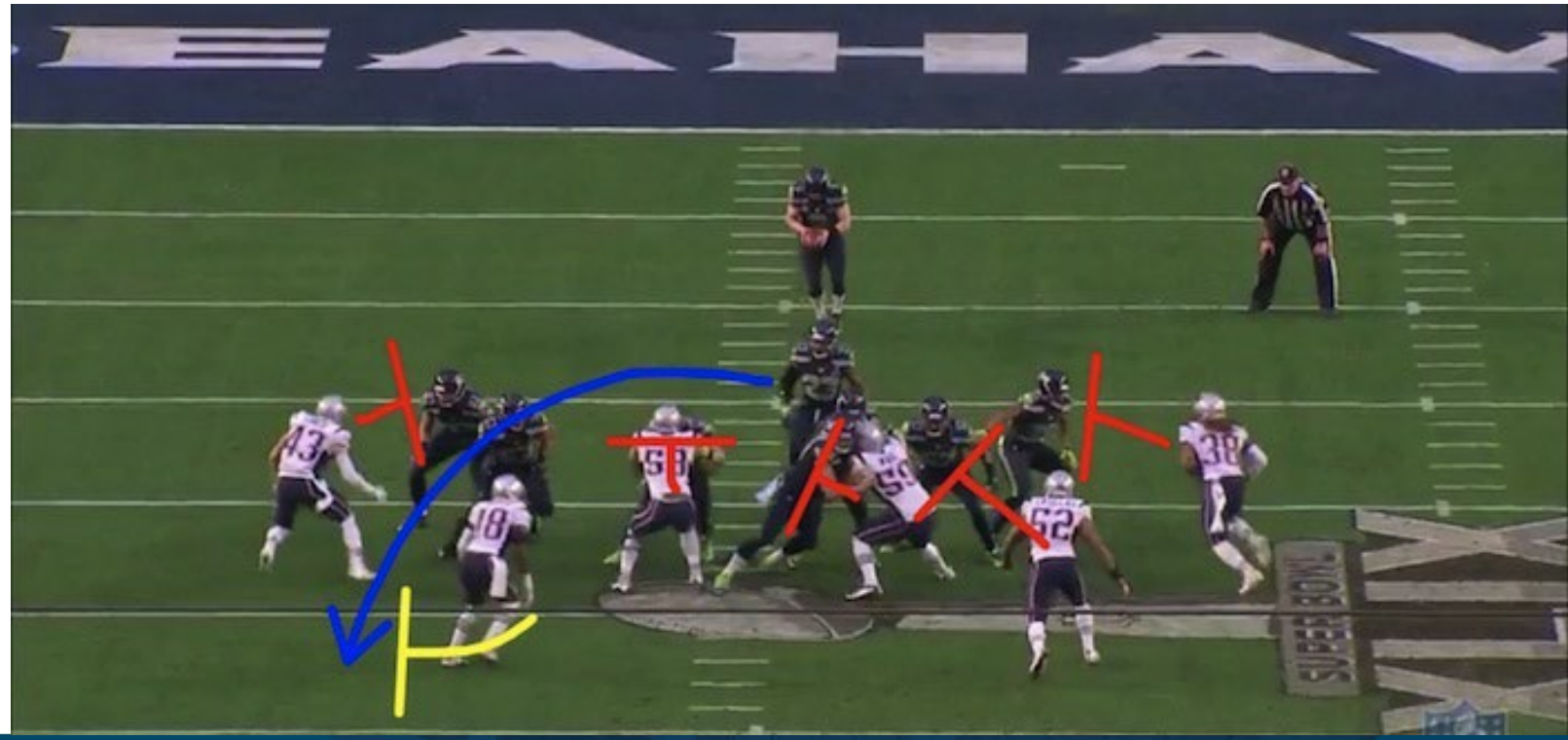


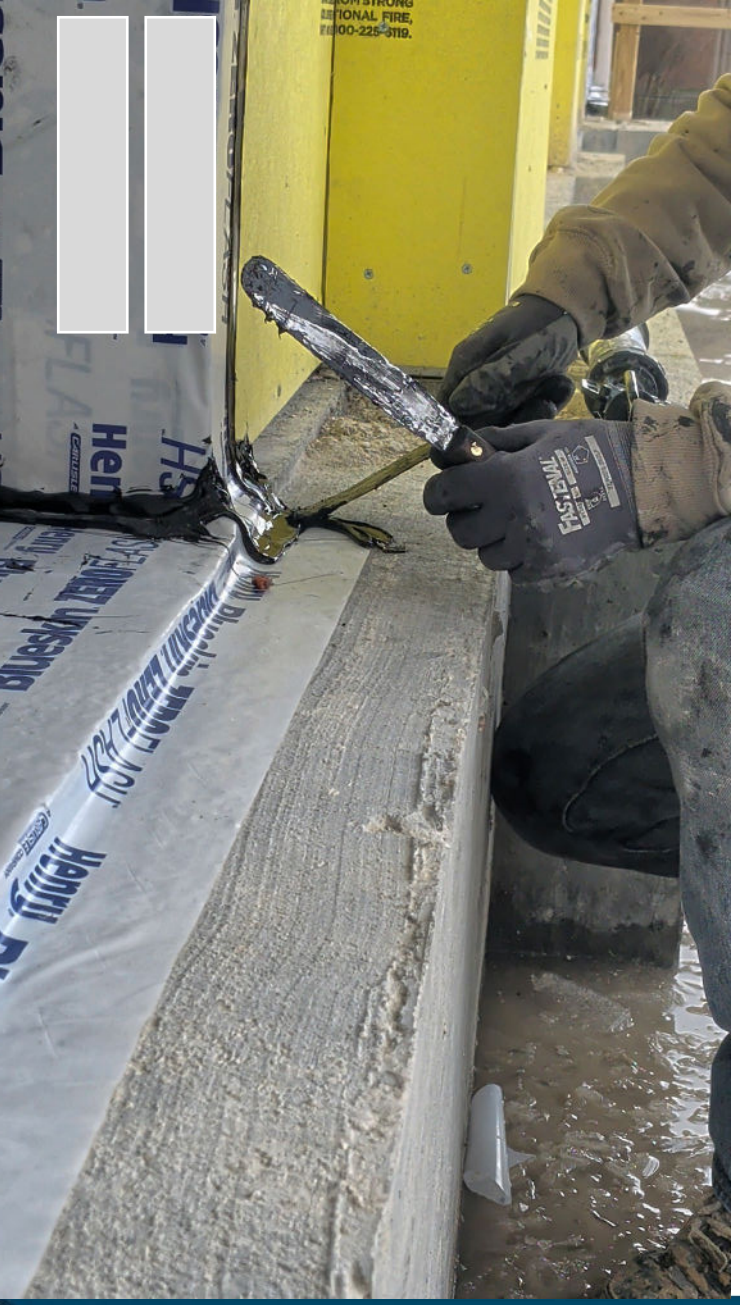



Frank Lloyd Wright's Fallingwater Is
Leaking. Inside the $7 Million Job to Fix It.
WSJ

The Rise of Hyper-Specialists

- Long Snapper
  - elite precision
  - invisible until failure
- Construction
  - similarly narrow
  - high-stakes specialists



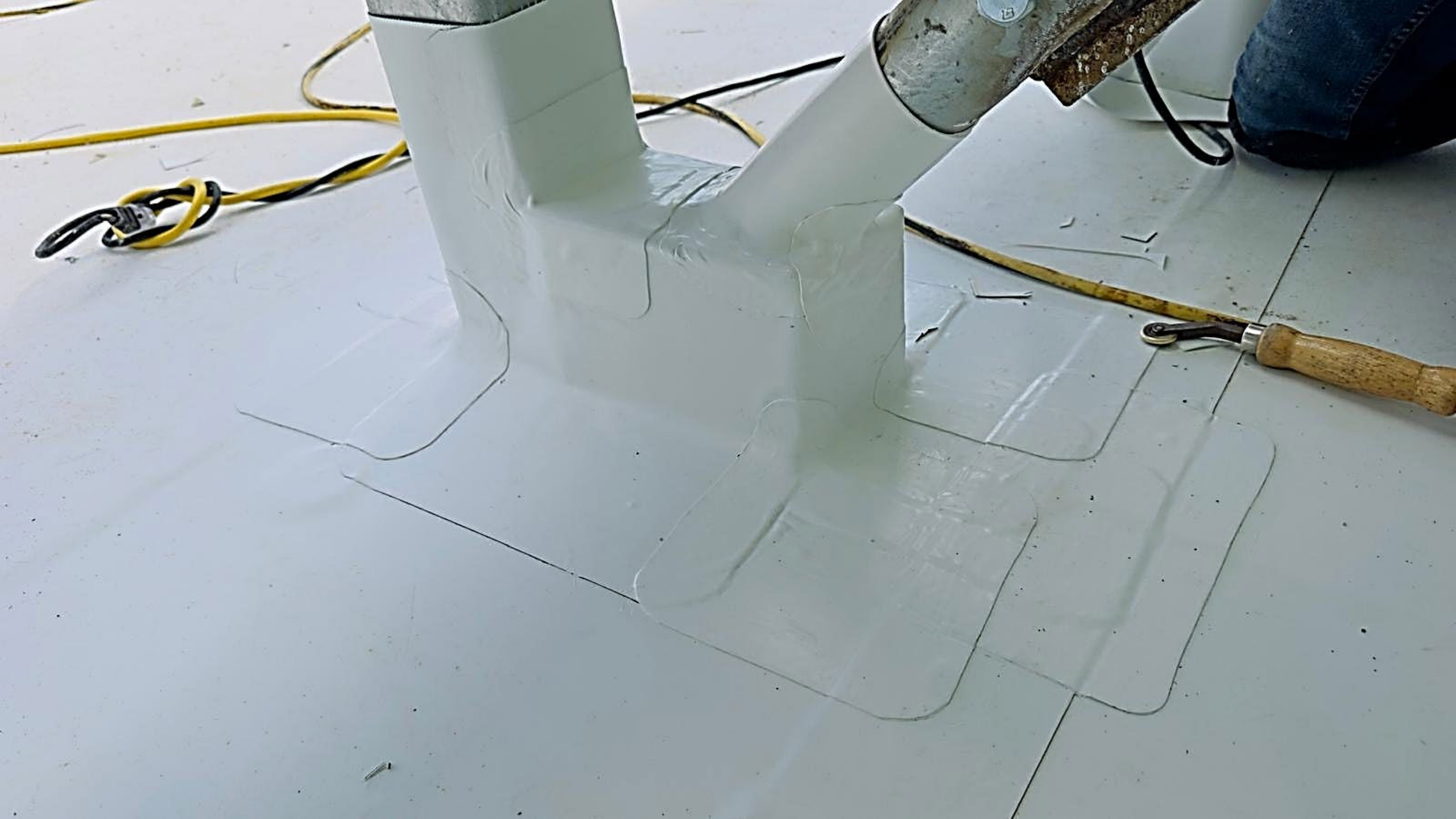


Tunnel Vision

- Work under constant chaos
- Get it done!
- **Silos**
  - Communication
  - Knowledge
  - Accountability

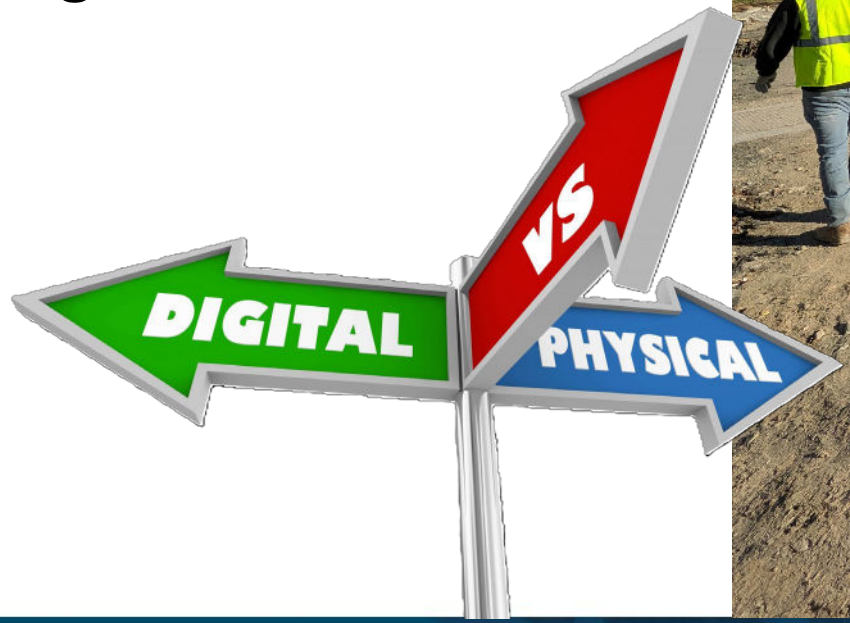
Coordination Challenges Multiply

- Every specialist adds a handoff
- **Every handoff adds risk**
- Scope gaps emerge at trade boundaries



Breaking Ground

- Set **ownership** for transitions early
- **Align** tools + versioning
- **Mock it up!**



The Continuity Chain

- Team continuity

+

- System continuity

=

- Project success

Meetings = Alignment
Not Overhead

- Issues start in **conversations that never happened**
- Meetings keep teams aligned across turnover
- **Team** continuity **supports system** continuity

Why Face-to-Face Wins

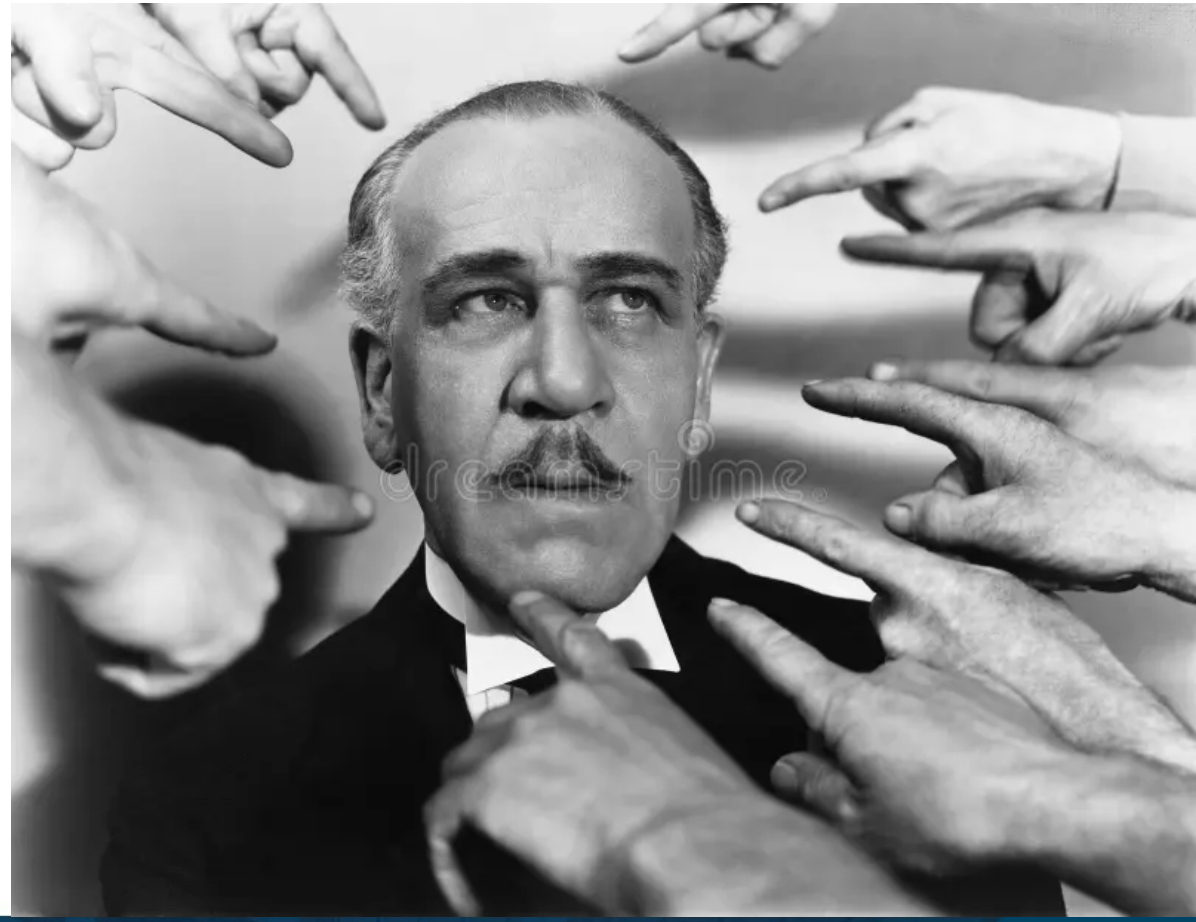
- 34× more effective than email for action
- **Speed to understanding = fewer scope gaps**
- Give space for everyone to be heard

Non-Verbal = Faster Alignment

- Tone, pace, gestures → **full meaning**
- **Context** fills gaps across generations and cultures
- Build **trust** between disciplines

You Can See Confusion

- Non-verbal cues **expose uncertainty**
- Clarify in the moment
- **Reduce ambiguity in sequencing**

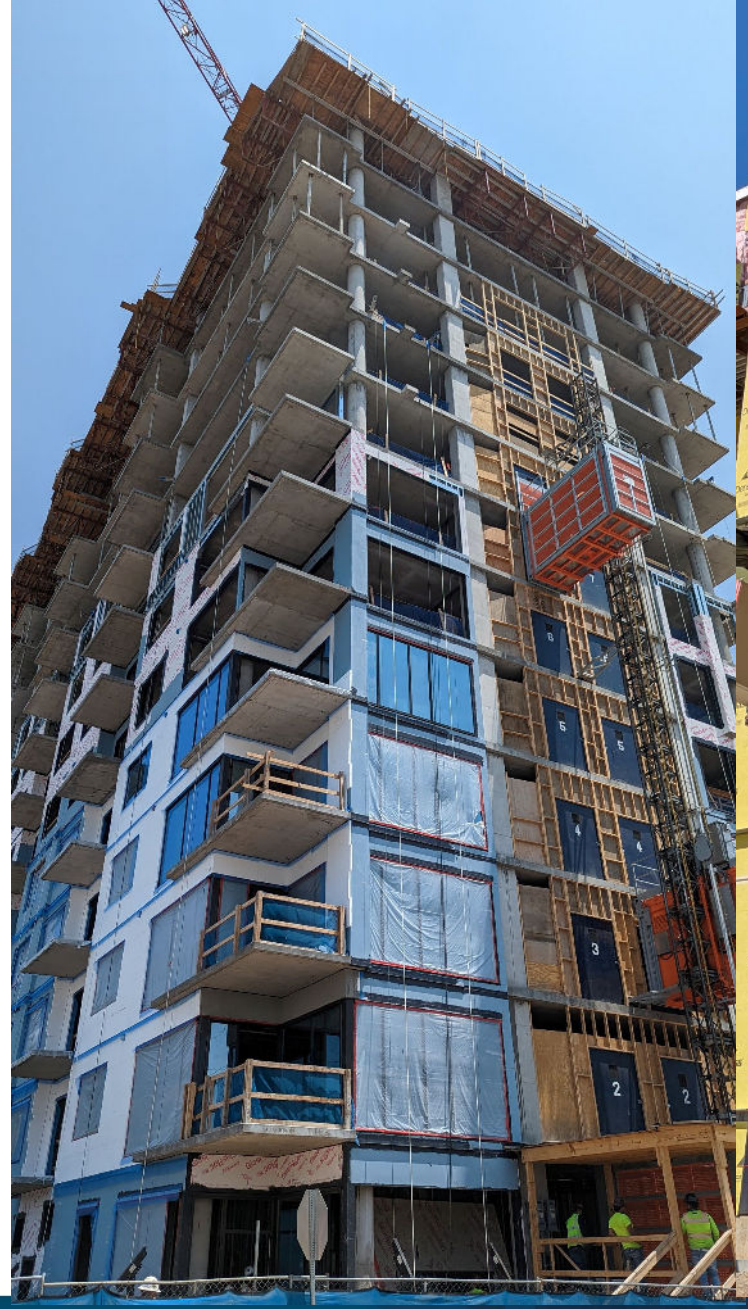


Documentation vs Social Bandwidth

- Email excels at record-keeping
- Face-to-face excels at **clarity** & **influence**
- **Use** all **intentionally**

Drying In

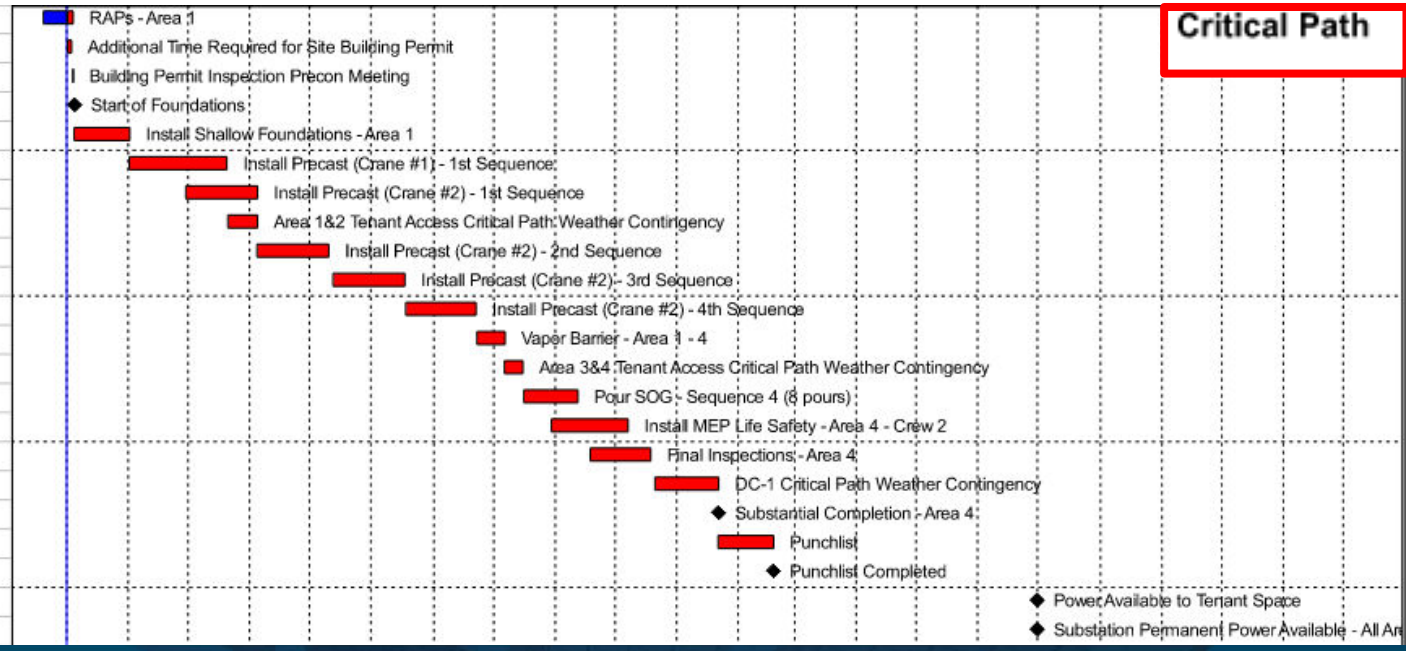
- **Handoffs multiply**
- Weather raises stakes
- Check for **alignment**



Specialists Come in Waves

- **Mis-timed** trades → **mis-aligned** continuity = scope gaps
- Overlaps create **concealed** conditions
- Manage waves intentionally – **sequence!**

M6240	RAPs - Area 1	10	3	18-Feb-26 A	04-Mar-26	0
FRAG.M7875	Additional Time Required for Site Building Permit	2	2	02-Mar-26	03-Mar-26	0
FRAG.M7920	Building Permit Inspection Precon Meeting	1	1	04-Mar-26	04-Mar-26	0
M4030	Start of Foundations	0	0	05-Mar-26		0
M6450	Install Shallow Foundations - Area 1	20	20	05-Mar-26	01-Apr-26	0
M7550	Install Precast (Crane #1) - 1st Sequence	35	35	02-Apr-26	20-May-26	0
M7620	Install Precast (Crane #2) - 1st Sequence	25	25	30-Apr-26	04-Jun-26	0
M7310	Area 1&2 Tenant Access Critical Path Weather Contingency	10	10	21-May-26	04-Jun-26	0
M7630	Install Precast (Crane #2) - 2nd Sequence	25	25	05-Jun-26	10-Jul-26	0
M7640	Install Precast (Crane #2) - 3rd Sequence	26	26	13-Jul-26	17-Aug-26	0
M7240	Install Precast (Crane #2) - 4th Sequence	25	25	18-Aug-26	22-Sep-26	0
M7190	Vapor Barrier - Area 1 - 4	10	10	23-Sep-26	06-Oct-26	0
M7850	Area 3&4 Tenant Access Critical Path Weather Contingency	7	7	07-Oct-26	15-Oct-26	0
M7380	Pour SOG - Sequence 4 (8 pours)	20	20	16-Oct-26	12-Nov-26	0
M6830	Install MEP Life Safety - Area 4 - Crew 2	25	25	30-Oct-26	07-Dec-26	0
M6880	Final Inspections - Area 4	20	20	19-Nov-26	18-Dec-26	0
M7120	DC-1 Critical Path Weather Contingency	20	20	21-Dec-26	21-Jan-27	0
M6890	Substantial Completion - Area 4	0	0		21-Jan-27*	0
M7140	Punchlist	20	20	22-Jan-27	18-Feb-27	0
M6030	Punchlist Completed	0	0		18-Feb-27	0
M6560	Power Available to Tenant Space	0	0		30-Jun-27*	0
M5011	Substation Permanent Power Available - All Areas	0	0		30-Jun-27	0



LOOKS GOOD FROM MY HOUSE

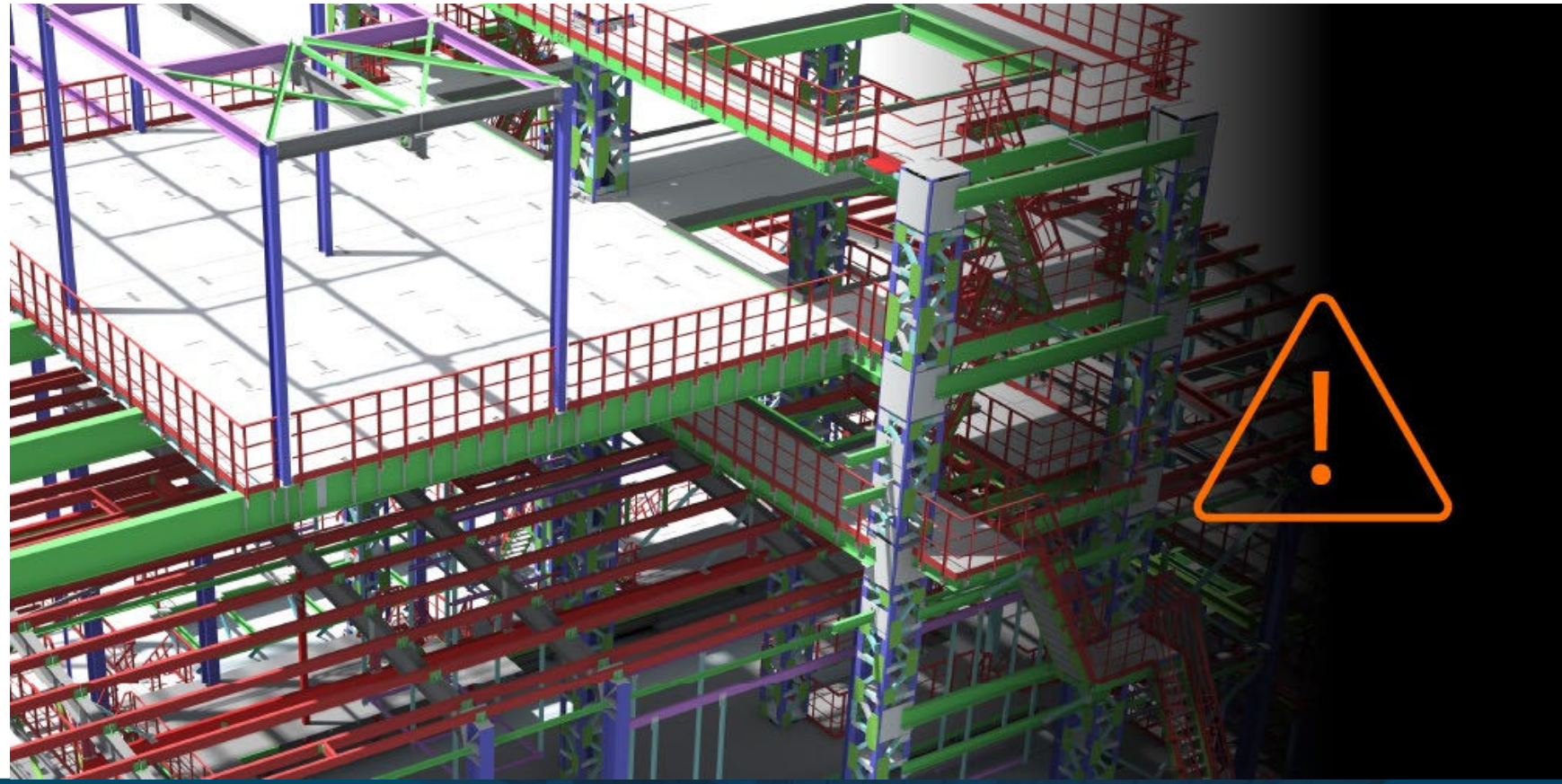
Real-Time Clarifications

- ‘**Walk me through** the tie-in’
- Sketch → confirm → commit
- **Prevent** field-level **ambiguity**

Tech Revolutions Are Not New

Where Tech Helps

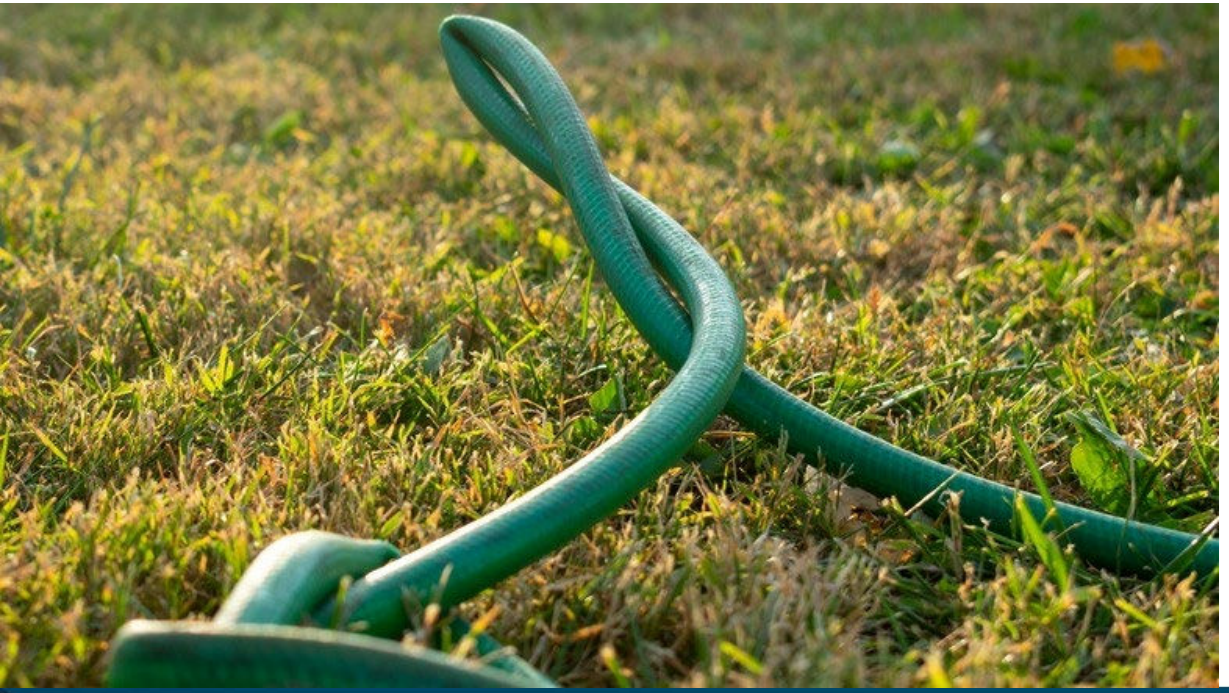
- Clash detection
- Data storage and **aggregation**
- Decision capture
- **Leveling communication**

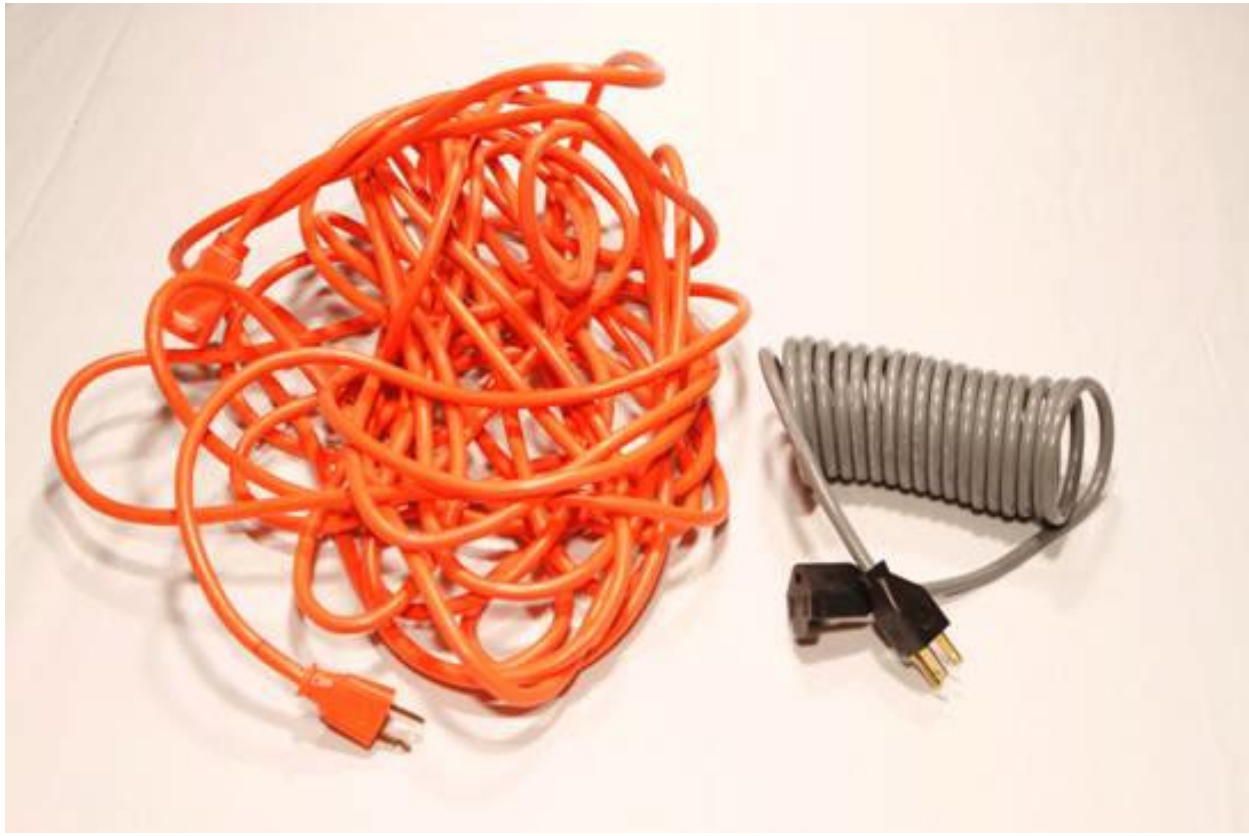


Tool Etiquette = Team Etiquette

- **Single source of truth**
- Clear naming & version rules
- Defined update cadence
- **Language matters**

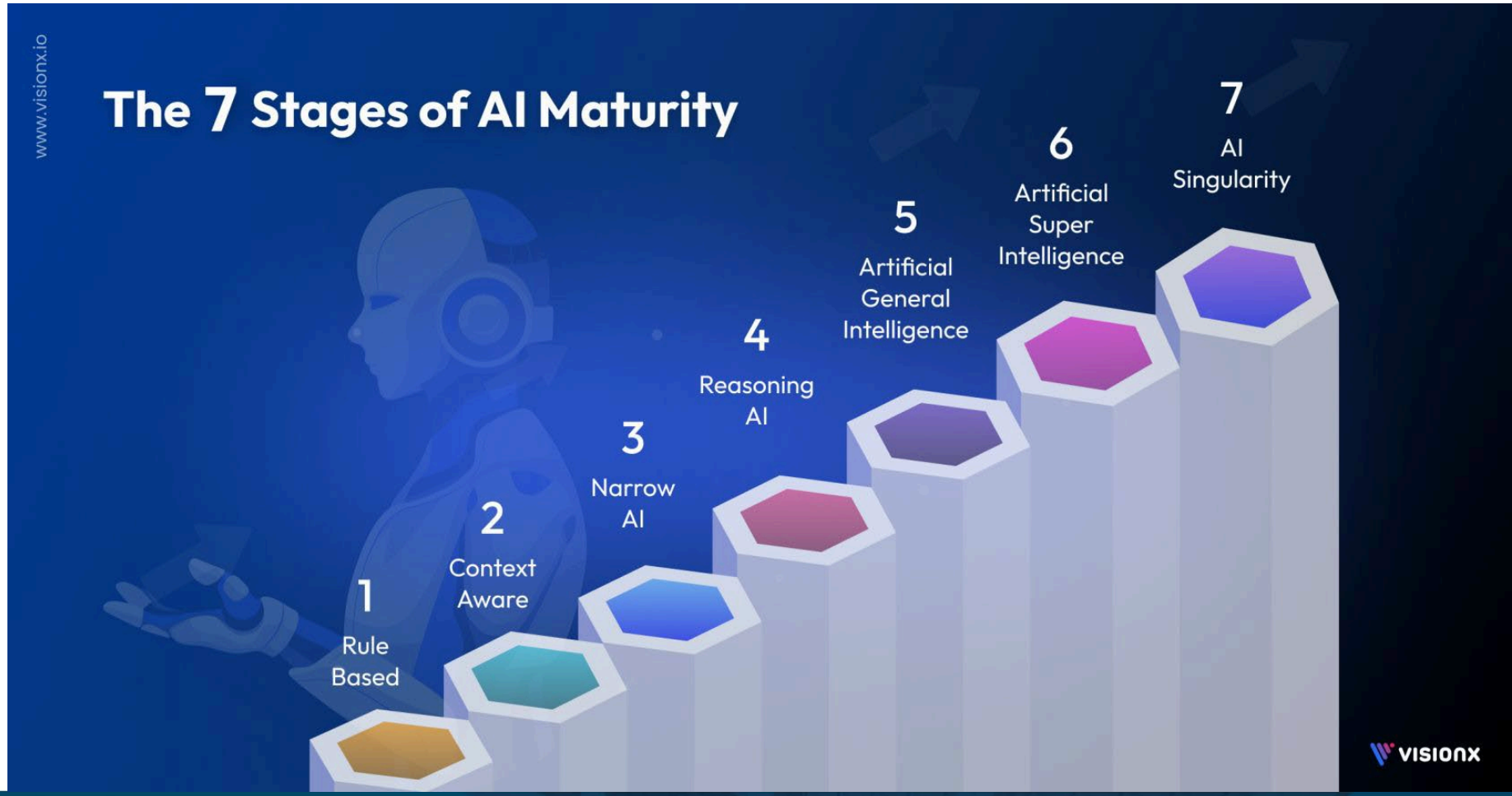
Tool Etiquette = Team Etiquette





AI as a Force Multiplier

- **Observability**
- Automations
- Terminology **consistency** checks



Hash Out Scope Gaps

- Ask **directly**: ‘Who ties into the air barrier here?’
- **Surface overlaps** before mobilization
- 5-minute talk prevents 5-weeks of rework

Where Continuity Breaks

- When we assume
- When we don’t talk
- When we don’t tolerate
- **When we get on the way**

Topping Out

- Confirm transitions closed
- **Resolve misalignments**
- Capture signoffs

The Walkthrough

- When threads stall → meet onsite
- **Spot real constraints together**
- Speak up!

Ironing Out Details

- **First things first**

- Life Safety
  - Heat
  - Water
  - Air
  - Vapor

S**t happens…

- **Drawings vs field** tolerances
- Clear assumptions
- Re-Align expectations

Life goes on

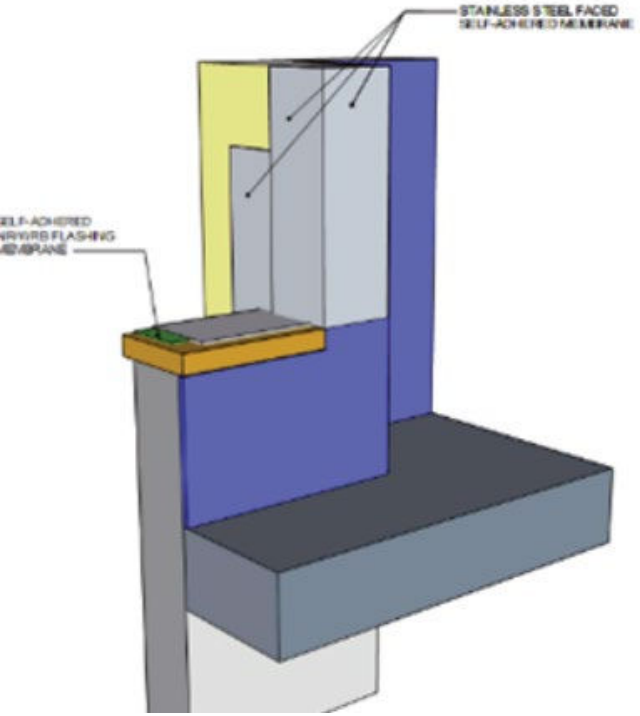
- **Lessons learned**
- Capture the ‘after’ condition
- Move on

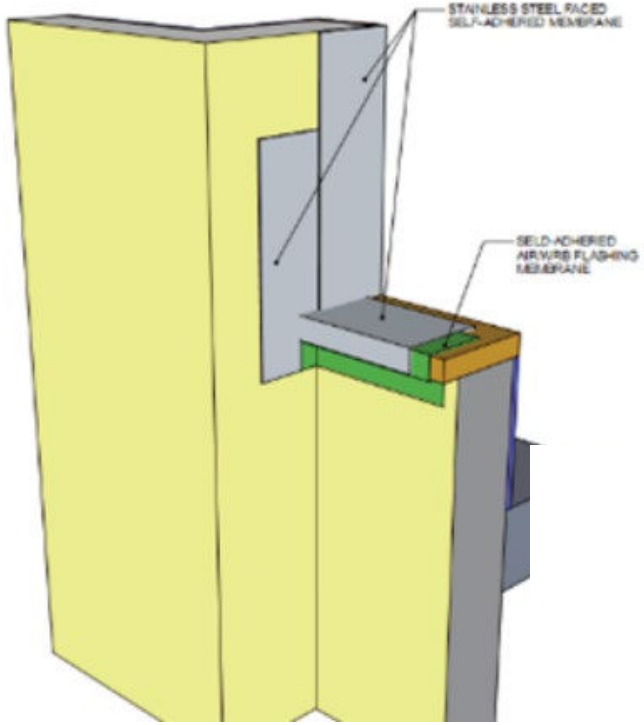
Evaluate!

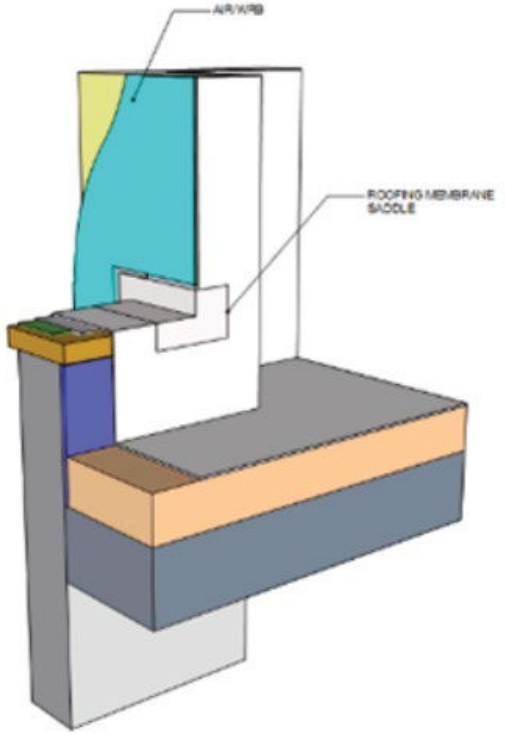
- Determine knowledge transfer
- **STRESS TEST**
- Speak up!

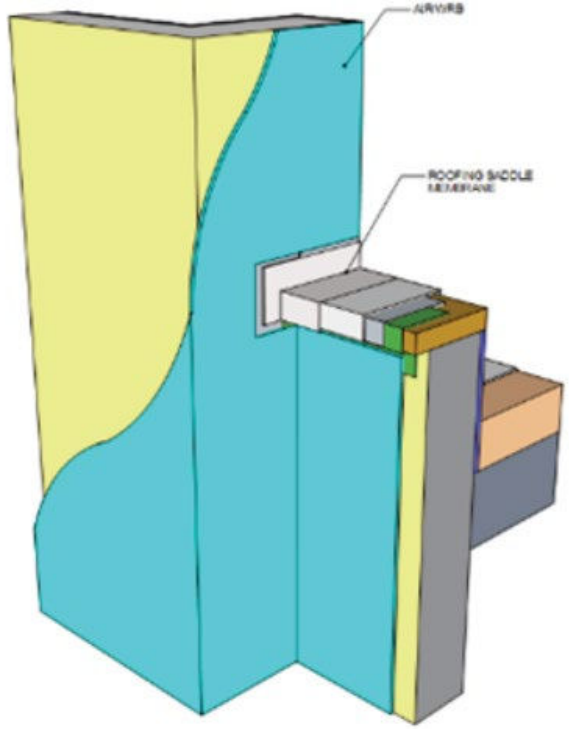
Where Tech Falls Short

- Politics, nuance, assumptions
- **Broken culture**
- Tools don’t align teams — habits do


STAINLESS STEEL FACED
SELF-ADHERED MEMBRANE


STAINLESS STEEL FACED
SELF-ADHERED MEMBRANE
SELF-ADHERED
AIR/VAPOR FLASHING
MEMBRANE


AIR/VAPOR
ROOFING MEMBRANE
SADDLE


AIR/VAPOR
ROOFING SADDLE
MEMBRANE

Digital Efficiency ≠ Physical Capacity

- Software **improves coordination**, not physical output
- ‘Efficiency mandate’: each worker doing 1.2–1.5× load
- **Labor shortages** driving >4% annual cost **inflation**

The Workforce Cliff (2026 → 2027)

- 349,000 new workers needed in 2026
- 456,000 needed in 2027
- **25% of workforce is 55+**

A ‘Steel’ Focus: Rebuild the Profession

- $5B VC **investment** in Con-Tech in 2025
  - If 10% to “**Trade Labs**”→ close labor gap in 3 years

- **Pay parity** gap:
  - Fresh grad - AI engineer ~$150K

    vs
  - Master plumber ~$90K

- Trades need safety, benefits, **real career ladders**

We’re Not Building Rocket Ships

Nature’s loads demand rigor

Performance

=

continuity + collaboration

Humility + listening

What Actually Works

- Define **clear expectations**
- Constant **communication**
- Leverage **human resources**
- **Embrace tech** advancements

Q & A

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