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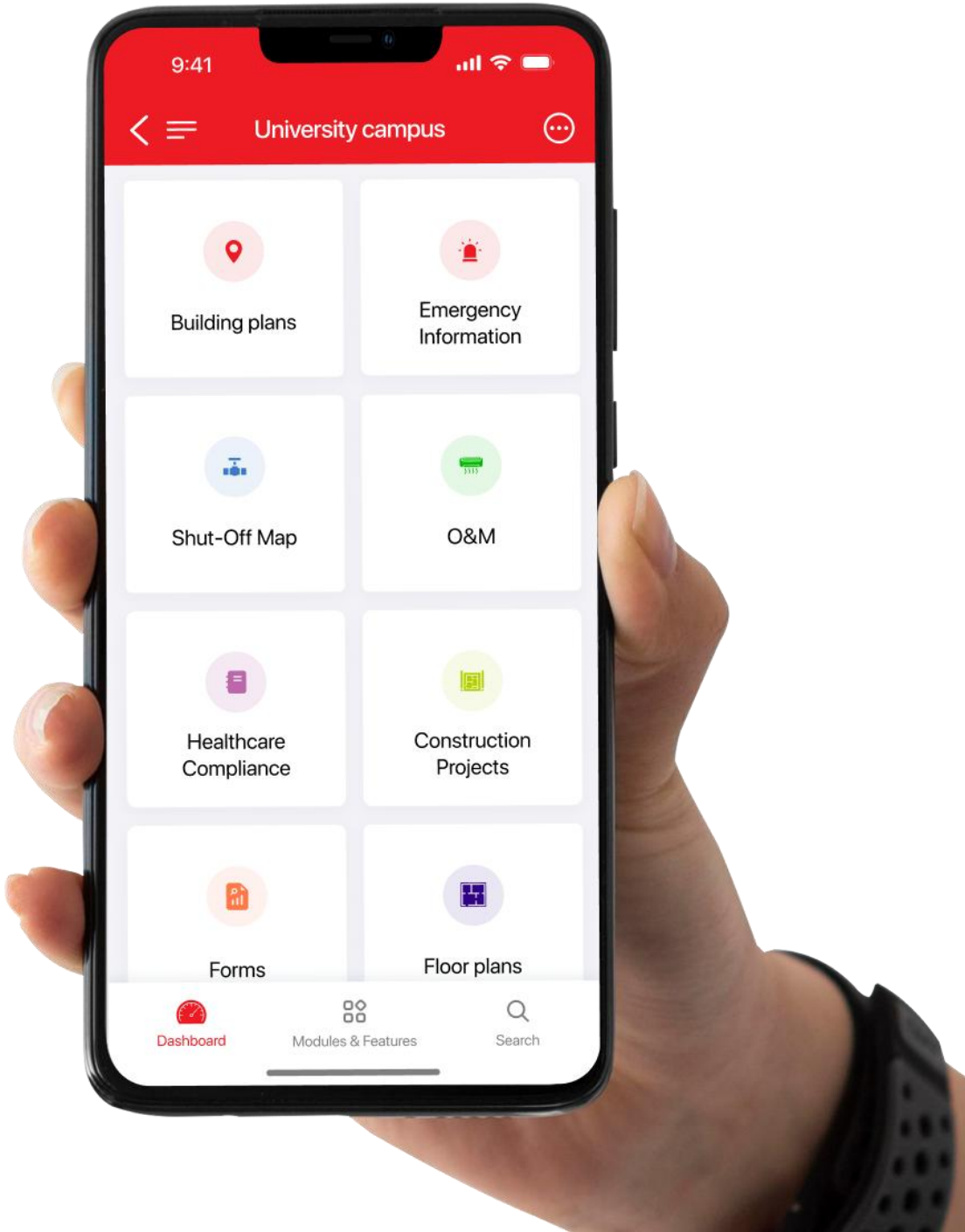
NFMT west

Closing the Loop:

Building Lifecycle Documentation That Stays Intact



Today's Speaker:
David Trask
Sr. Director Customer Education & Support, ARC Facilities & Host – *Facility Voices* Podcast



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NFMT West ‘26: Closing the Loop: Building Lifecycle Documentation That Stays Intact

Scan the code to receive an email with resources related to today’s session.

https://www.arcfacilities.com/NFMTWestSession/resources

VISION AWARDS 2024 WINNER facilitiesnet

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FACILITY MAINTENANCE DECISIONS READERS' CHOICE AWARDS -WINNER- FACILITY CLEANING DECISIONS

Leader SPRING 2024

MILESTONE Users Love Us

FALL 2025 Fastest Implementation



ARC Facilities gives teams instant mobile access to critical building information—helping organizations protect revenue, ensure business continuity, and reduce risk.

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Speaker

- Keynote speaker, podcast host, author, and thought leader in the facilities management industry
- Presenter at numerous and conferences including IFMA, APPA, ASHE, NFMT, Campus Safety, CAPPA, FHEA
- Advisory Board Member for Facilithon
- Member of the Education Program Committee for IFMA World Workplace
- Facilities & maintenance team advisor on productivity tools, risk mitigation and succession planning



David Trask
Sr. Director Customer Education & Support, ARC Facilities & Host – *Facility Voices Podcast*

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PEOPLE | PLACES | POSSIBILITIES

STRONGER FACILITIES
A BRIGHTER TOMORROW


What’s in your portfolio?
Facilities teams are responsible for managing buildings, equipment, and critical systems that often span **decades of change**.
The challenge is not just maintaining assets, but maintaining **institutional knowledge** of the building itself.
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1
NEW SCHOOL BUILT
Early 1970s


2
ADDITION ADDED
1980s–1990s


3
RENOVATIONS
2000s


4
REPURPOSED AS A MIDDLE SCHOOL
2010s


5
DEMOLISHED
2020s


6
NEW MODERN SCHOOL BUILT
2020s and Beyond

Many organizations face a major imbalance.



Older buildings
Limited documentation, outdated drawings, missing asset records.

Newer buildings
Extensive documentation, difficult to access, fragmented across vendors or systems, and long delays in receiving.

Staff turnover
Knowledge about systems and locations lost over time.

Renovations
Changes made without updating building records.

The result
Operational blind spots, slower response times, and higher lifecycle costs.

The goal
Create a continuous information lifecycle that follows the building from **design → construction → operation → renovation → future planning.**


The Old vs. New
Building Challenge
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The Old Building Challenge

Most organizations manage **a mix of buildings from different eras.**

Challenges with Older Buildings:

- Missing drawings
- Unknown system locations
- Poor asset documentation
- Knowledge stored in staff memory
- Retiring personnel taking knowledge with them



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New Building Challenges

Challenges with New Buildings:

- Large volumes of documentation
- Documentation scattered across systems
- Teams unfamiliar with new technology
- Complex building automation systems
- Difficulty accessing documentation in the field

The Common Problem

The information exists—but **the right people cannot access it when they need it.**



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MISSING
Incomplete historical drawings.
Missing updates over the years.
Changes made for the past 100 years.
CONTRACTOR CHARGED AN ADDITIONAL
$280,000
"UNFORESEEN CONDITIONS."
Water line hit.
Natural gas line hit.
Fiber optic lines damaged.
Electrical lines damaged.
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Let's Start with the Basics...

Where is your building information?

- Paper and binders?
- Digital?
- In someone's head?

Who can access the information?

- All team members?
- New team members?
- Contractors?
- First responders?

How are they accessing the information?

- Desktop only?
- Available on phones/tablets in the field?

Can they share the information quickly?

- Seconds matter when things go sideways!



Getting a Seat at the Table



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New Construction Get Involved Early!

Involve facilities early—
long before the building opens.

Don’t wait until the end of construction when decisions are already locked in.

Early involvement helps operations teams influence decisions that impact **maintenance for decades.**



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Key Contributions from Facilities Early in the Process



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- Review equipment placement for service accessibility.
- Ensure shutoffs and emergency equipment are properly located and documented.
- Provide input on equipment standardization across campus/facilities.
- Influence maintainability of systems and equipment.
- Ensure digital documentation requirements are included in project specs.
- **Advocate for mapped asset documentation during construction.**

Benefits:

- Reduced lifecycle costs
- Easier maintenance access
- Better emergency response readiness
- Reduced future renovation surprises

Define Closeout Deliverables and Set Expectations Early



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YOUR Org Sets the Expectation!

- Project closeout documentation often arrives months after building turnover, leaving operations teams working blindly.
- Facilities should define exactly what closeout must include before construction begins.

The Goal…

- Closeout should not be a binder on a shelf.
- It should be operational intelligence for maintenance teams.



Build Project Closeouts Throughout Construction



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BUILD IT AS YOU GO.
TURN IT OVER FASTER.

Continuously build your closeout package during construction—
so your team gets the information they need on day one.

CAPTURE
Collect RFIs, photos, submittals, and equipment data as work happens.

ORGANIZE
Keep everything organized by system, location, and discipline in real time.

VERIFY
Verify drawings and documents are current, accurate, and complete.

COMPLETE
Closeout package is complete, accurate, and ready—before the final walk.

DELIVER
Facilities team gets what they need immediately and is ready to operate from day one.

WAITING UNTIL THE END



- Last-minute scramble
- Missing or incomplete information
- Delays in turnover
- Higher risk & cost
- Frustrated teams

VS.

BUILDING IT CONTINUOUSLY



- Accurate & complete information
- Faster & smoother turnover
- Facilities team ready on day one
- Lower risk & fewer delays
- Better decisions, lower cost

BETTER INFORMATION. FASTER TURNOVER. STRONGER OPERATIONS.

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Turn Commissioning
Into Actionable Maintenance on Day One



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The Old Way…

- Commissioning reports often become **large binders that sit unused**.
- Instead, commissioning data should feed directly into **preventive maintenance programs**.



Turn Commissioning Into Actionable Data

Key Commissioning Data

- Equipment startup data
- Maintenance intervals
- Performance benchmarks
- Initial system settings
- Operational parameters

Benefits

- Maintenance teams know how systems were designed to operate
- Faster troubleshooting
- Accurate preventive maintenance setup
- Reduced early system failures




Progress Site Walks
Catch Potential Issues Early
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Active Site Walks

What to Verify During Walks

- Equipment accessibility
- Shutoff valve locations
- Mechanical room layouts
- Emergency equipment placement
- System labeling
- Asset tagging

Benefits

- Catch issues before drywall or ceiling grids close
- Prevent inaccessible equipment
- Ensure emergency systems are properly documented



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Map Assets
While the Ceiling Grid is Open
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Mapping Before Ceiling Grid Is Closed

- This is one of the **most critical moments in the lifecycle** of building documentation.
- Once the ceiling grid closes, critical systems become **invisible.**



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The “Time-Suck”

- Technicians often **waste valuable time** searching for equipment and shutoffs.
- Undocumented items lead to **slower response times**.
- Hidden systems can cause **unexpected issues**.



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valent.
MAIN
Intertek
3061909
ETL LISTED
CONFORMS TO
ANSI/UL STD 1995
CERTIFIED TO
CAN/CSA C22.2 STD NO. 236
10:24
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Equipment Details
Manufacturer Valent
Model VCH-120
Serial Number VCH120-45872
Type Air Handling Unit (AHU)
Year 2018
Location Roof - Building A
Size / Capacity 120,000 CFM
Electrical 480V / 3PH
O&M Manual
Wiring Diagram
Cut Sheet
Photos (12)
Maintenance History

Lack of immediate access to critical shutoff locations puts **your building, people and operations at risk** and can lead to costly damage, downtime and safety hazards.

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NOT MAPPED.
NOT VERIFIED.
NOT OKAY.

Missing, outdated, or inaccessible equipment information slows your team down and puts your organization at risk.



SHORT TERM IMPACT

Slower Response
Time is wasted searching for information.

More Downtime
Delays lead to disruptions and lost productivity.

Inefficient Teams
Frustration, repeat work, and finger pointing.

Higher Costs
Overtime, emergency calls, and avoidable repairs add up.

Increased Risk
Wrong shutoffs, missed steps, and safety exposures.

LONG TERM IMPACT

Poor Planning
Inaccurate data leads to bad decisions and wasted budgets.

Aging Assets
Missing history means missed maintenance and shorter asset life.

Knowledge Loss
People leave, knowledge leaves with them.

Reactivity Over Strategy
You stay in crisis mode instead of planning ahead.

Audit & Compliance Challenges
Incomplete records make compliance and audits difficult.

LACK OF INFORMATION. LACK OF CONTROL. HIGHER RISK.

Unknown Locations. | Outdated Information. | No Access In the Field. | Delays & Downtime. | Higher Costs, Higher Risk.

Project Turnover to Facilities Teams



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Access on Day One

Facilities teams should have **complete access to building documentation the moment the building opens.**

Day-One Access Should Include:

- As-Builts
- Mapped Equipment & Shutoff Locations
- Equipment manuals
- Warranty information

Why This Matters (Without this access):

- Maintenance teams lose time locating equipment
- Emergency response is slower
- Preventive maintenance starts late
- Institutional knowledge gaps begin immediately



Maintenance Teams

Document Changes in Real Time



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Things Change

- Buildings **never stay the same**.
- Assets are replaced, moved, upgraded, or removed constantly.
- Industry studies show that 20–40% of assets in the field change over time.



INFORMATION YOU CAN TRUST. DECISIONS YOU CAN COUNT ON.

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Is your team able to mark-up plans, update equipment changes and add shutoff changes in the field LIVE when they happen?

ACCURATE. CURRENT. COMPLETE.
Everyone works from the most up-to-date information.

MAKE CHANGES IN THE FIELD
Update plans and asset information as changes happen.

MARK-UP PLANS LIVE
Add notes, markups and details directly on your plans.

UPDATE SHUTOFF CHANGES
Add or adjust shutoff locations so your team always has the right information.



Real-time updates in the field

Accurate information you can trust

Better collaboration across your team

Faster response in critical situations

Smarter planning. Lower costs.

KEEP YOUR BUILDINGS RUNNING.
KEEP YOUR INFORMATION CURRENT.
CAPTURE IT LIVE. TRUST IT ALWAYS.


Continuous
Improvement Program
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Build a Living Knowledge Base

Building information should evolve over time.
Facilities teams can add valuable operational insights.

Valuable Field Knowledge to Capture

- Filter sizes
- Belt sizes
- Maintenance/ Troubleshooting notes
- Photos & Video
- Failure history
- Replacement dates

Benefits

- Faster troubleshooting
- Reduced technician learning curve
- Preservation of experienced staff knowledge



DOCUMENT NOW. PRESERVE KNOWLEDGE. BEFORE BOB LEAVES.

Capture what Bob knows **today**,
so it's there for **tomorrow**.

Walk the site together.
Talk through what's underground, behind walls, and in the past.

Capture exact locations.
Utility lines, valves, access points, and equipment connections.

Record the history.
Why changes were made, when, and by whom.

Add context and photos.
The details behind the work that aren't in any drawings.

Turn knowledge into a team asset.
So everyone can find it, use it, and build on it.

Don't wait for a crisis.
Document now. Prevent problems later.



DAY 1. THE RIGHT INFORMATION. A FASTER START.

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Give new technicians access to all your building information from DAY 1 and get them up-to-speed faster.

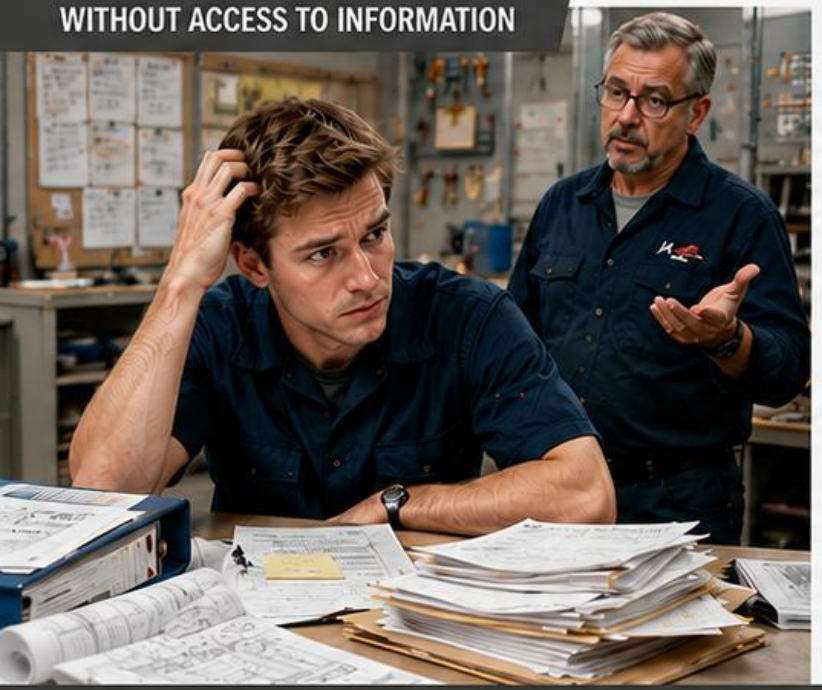
Faster Onboarding

More Confident Technicians

Higher Productivity

Safer Operations

WITHOUT ACCESS TO INFORMATION

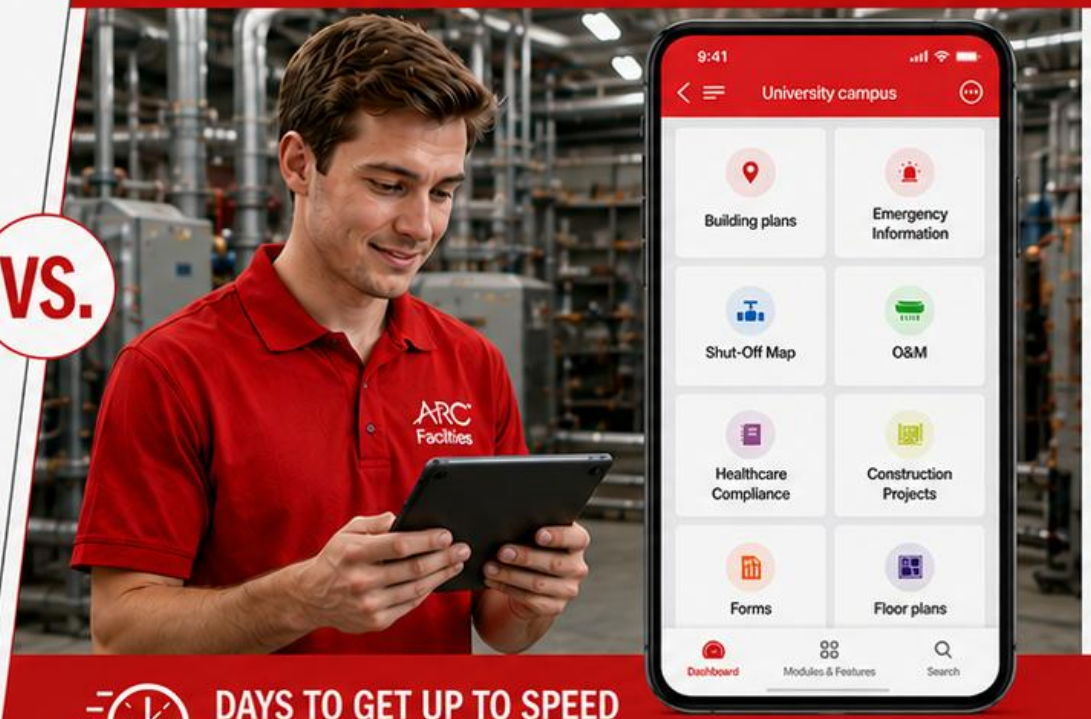


- Searching for information
- Asking others where everything is
- Learning by trial and error
- Slower response times
- Frustration and uncertainty

6-12+ MONTHS TO GET UP TO SPEED:
Lost time. Higher risk. Lower confidence.

VS.

WITH ACCESS TO ALL BUILDING INFORMATION ON DAY 1



- Instant access to what they need
- Find equipment, locations & history in seconds
- Follow proven processes and procedures
- Respond faster with confidence
- Productive and contributing from day one

DAYS TO GET UP TO SPEED
Save time. Reduce risk. Build confidence.

INFORMATION EMPOWERS PEOPLE.
When your team has the information they need, onboarding is faster, operations run smoother, and your buildings are better cared for.

GIVE NEW HIRES THE BEST TOOL ON DAY 1:
ACCESS TO ALL YOUR BUILDING INFORMATION.

Facility Condition Assessments (FCA)



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Garbage-In, Garbage-Out

Missing, Inaccurate, Out-of-Date
Building Information



FACILITIES CONDITION ASSESSMENT

ACCURATE INFORMATION OUT

Complete, Verified, Up-to-Date
Building Information



RESULTS WITH BAD INFORMATION

- Inaccurate Findings
- Higher Costs
- Missed Risks
- Inefficient Planning
- Misaligned Priorities

RESULTS WITH ACCURATE INFORMATION

- Reliable Findings
- Optimized Budgets
- Identified Risks
- Smarter Planning
- Confident Decisions


Budget &
Planning
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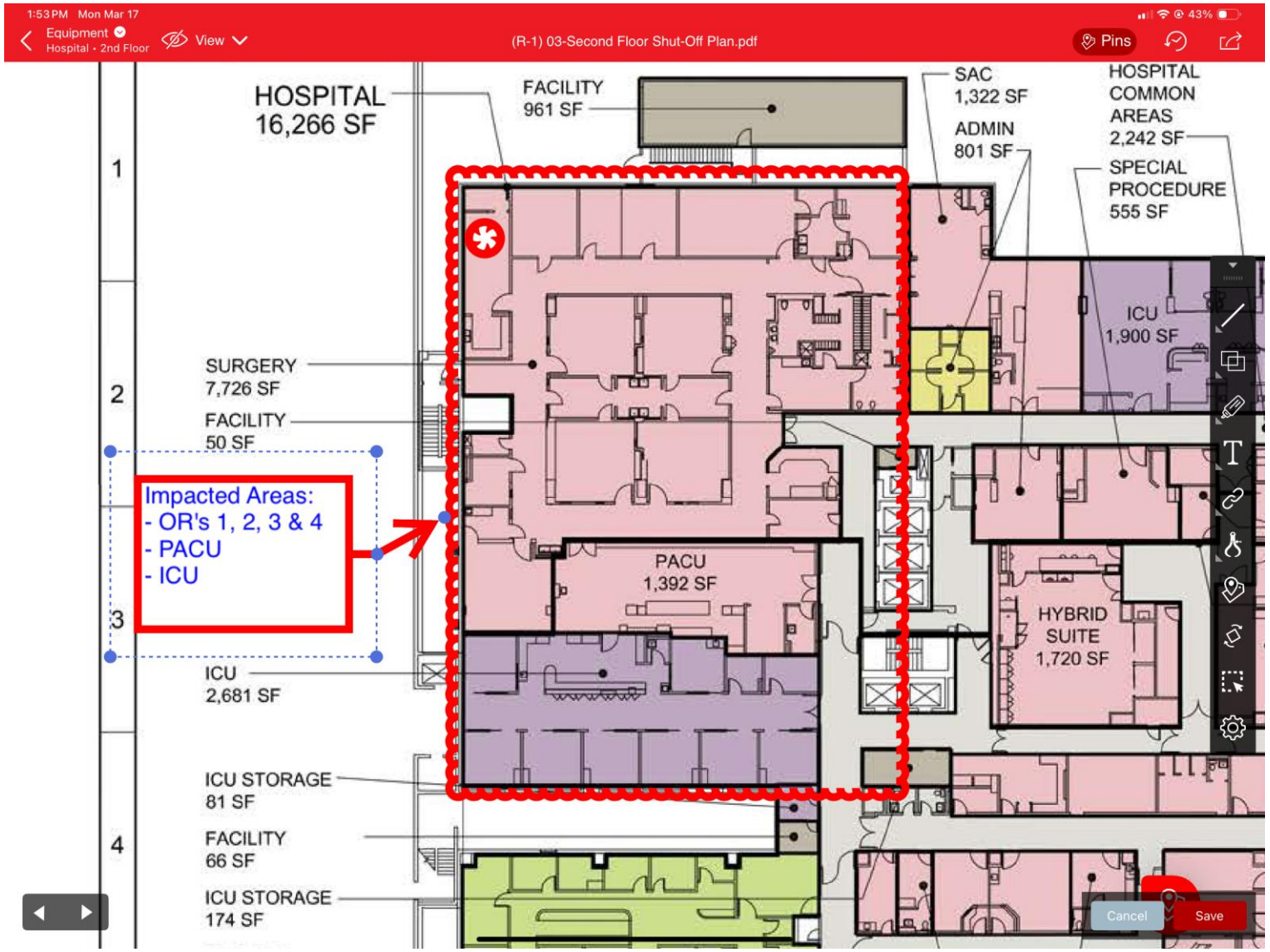
Educate Leadership on the Impacts of Equipment Failures



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Using Heat Maps to Tell the Story

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- Makes budget requests tangible.
- Visuals lead to 70% better understanding in budget meetings. (Harvard Business Review)
- Heat map-based proposals are 40% more likely to be funded.
- Real-time risk visuals improve response planning accuracy.
- Stronger capital planning & Data-driven budgeting.

Photos are Powerful!

With mapped building data, organizations can visualize **risk and aging infrastructure**.




Future
Renovations
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Hidden Suprises

One of the biggest risks in renovation projects is **hidden building conditions**.

Without accurate documentation:

- Contractors spend time searching
- Unexpected issues arise
- Project costs increase



With Accurate Building Documentation…

Architects, Contractors & PM’s can access:

- Historical drawings
- Asset locations
- All previous renovation details
- Hidden utilities
- Structural information

Benefits:

- Faster renovations
- Fewer surprises
- Reduced change orders




All Departments
on the Same Page
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Single Source of Truth

A Shared Platform Provides:

- Transparency
- Collaboration
- Consistent data access
- Reduced departmental silos

Benefits:

- Faster decisions
- Better planning
- Improved risk management



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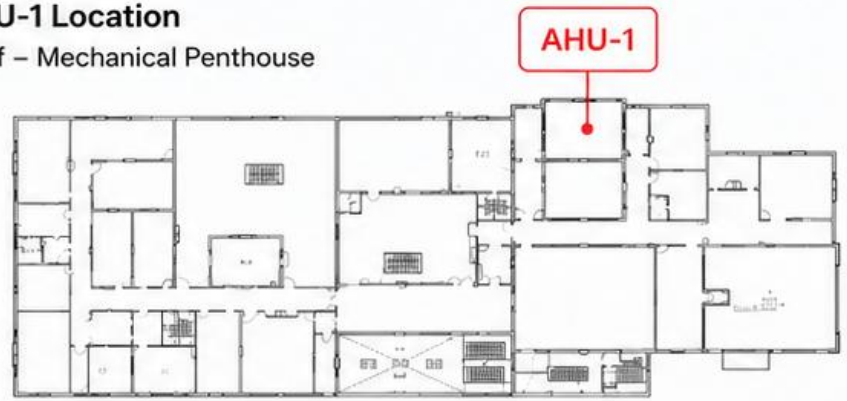
ARC Intelligence

"Show me the location and filter size of AHU-1"

Here's what I found for AHU-1:

AHU-1 Location

Roof – Mechanical Penthouse



Filter Information

Filter Type:	MERV 13 Pleated
Filter Size:	20" x 25" x 2"
Quantity:	4
Last Changed:	May 15, 2025
Next Due:	August 15, 2025



Ask ARC Intelligence another question...

Proactive Lifecycle Strategy for Building Information



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The Solution

Treat building information as a living operational system, not static documentation.



Proactive Lifecycle Approach

1 Design Phase

- Define documentation standards
- Require digital asset documentation



2 Construction Phase

- Map assets during installation
- Capture documentation progresssively



3 Turnover

- Deliver organized, accessible documentation
- Set up preventive maintenance



4 Operations

- Enable field access to building information
- Capture changes in real time

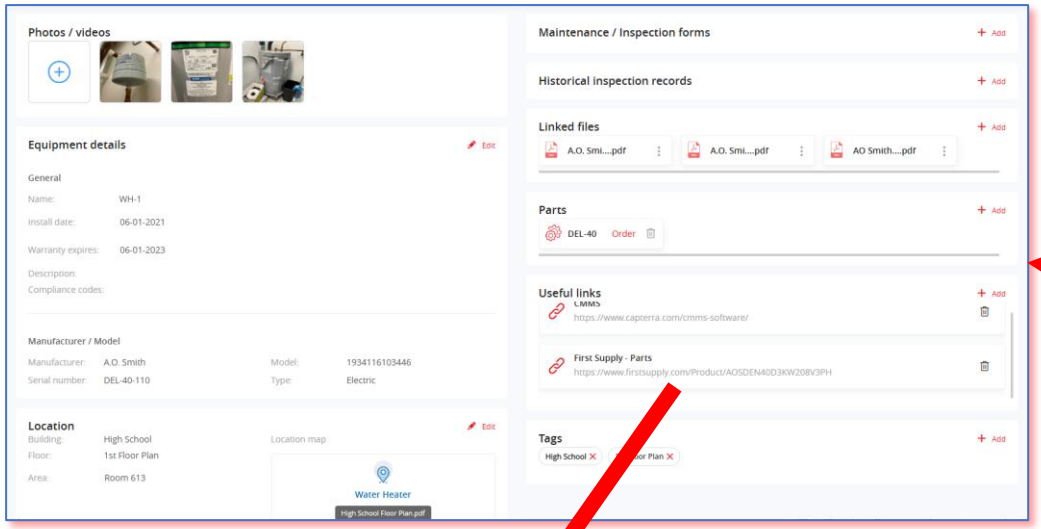


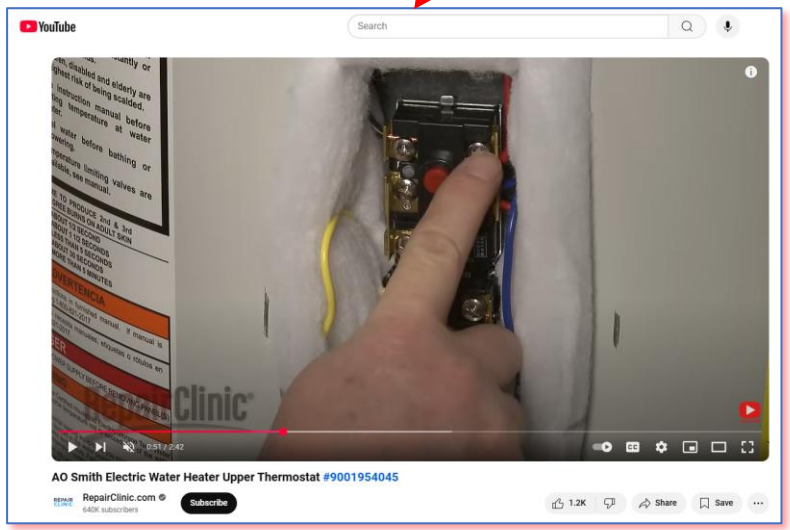
5 Continuous Updates

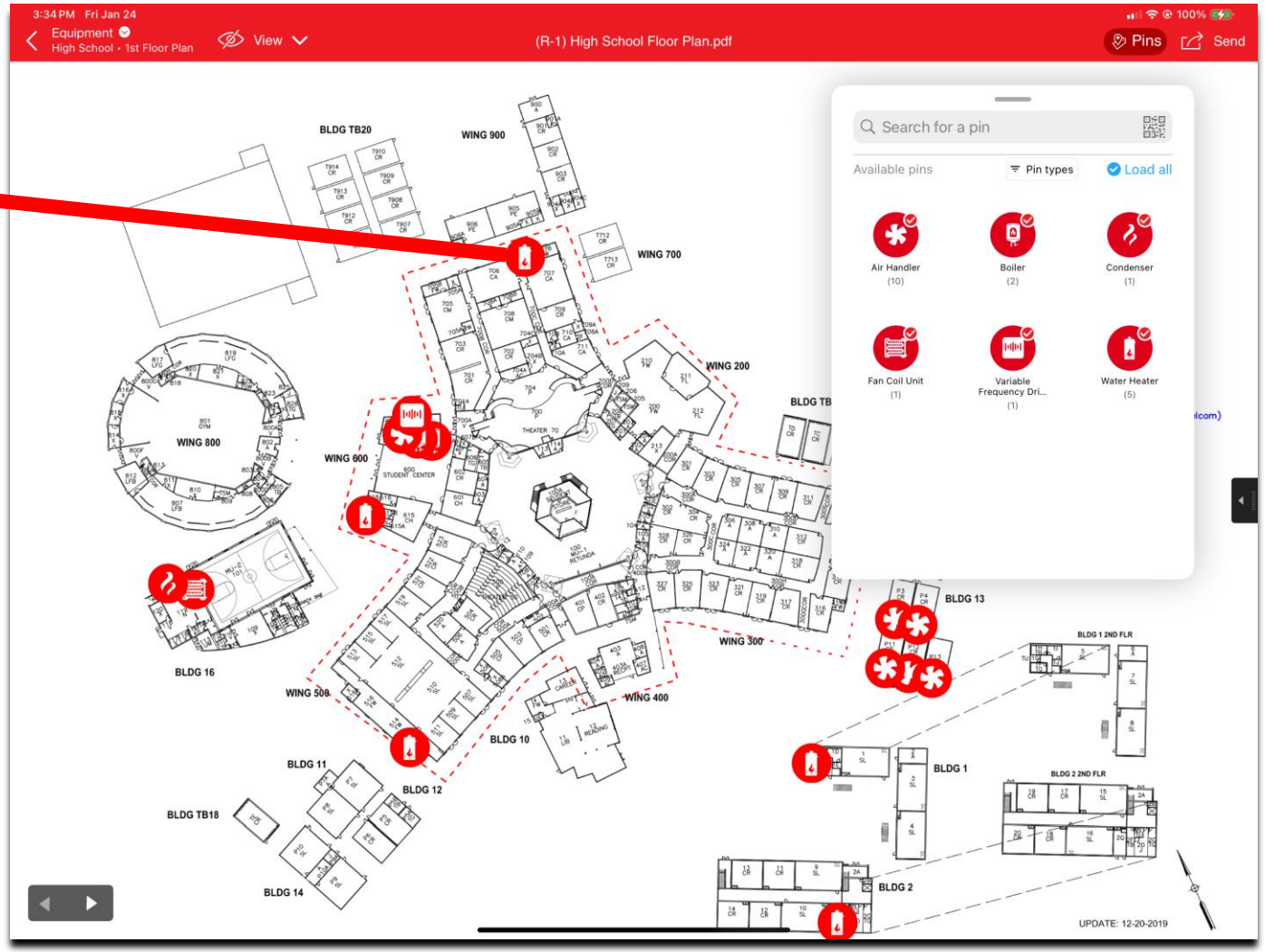
- Document repairs and modifications
- Maintain current drawings and asset data



Access all shutoffs & equipment locations in seconds…







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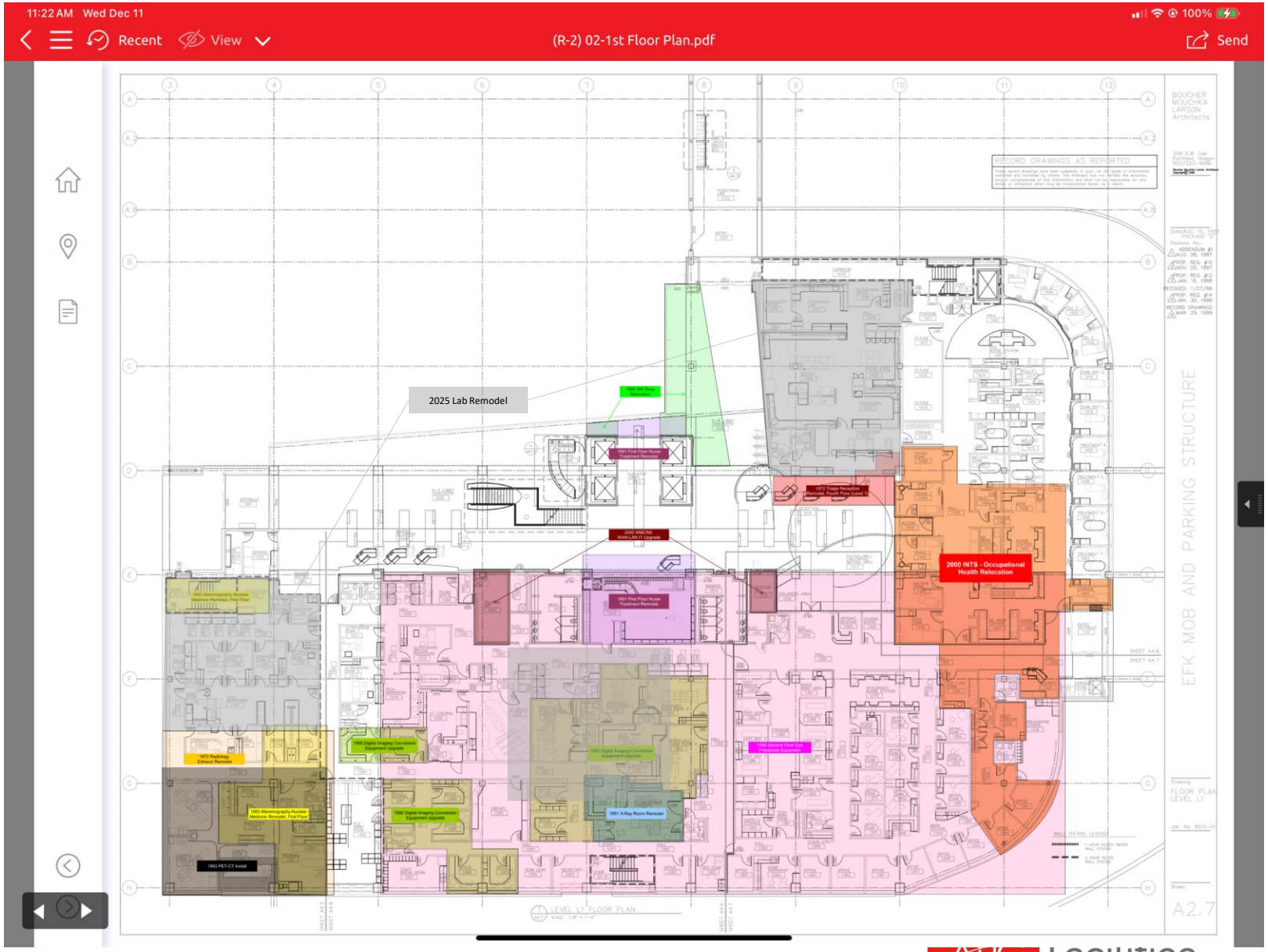
Mapped Building Lifecycle Changes



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Success Roadmap

1

Phase 1 — Establish Standards

Define documentation requirements for projects.

2

Phase 2 — Capture Critical Infrastructure

Map assets, shutoffs, and equipment.

3

Phase 3 — Enable Field Access

Provide mobile access to building information.

4

Phase 4 — Maintain Data Continuously

Document changes as they occur.

5

Phase 5 — Use Data Strategically

Support planning, budgeting, and renovations.

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Driving Long-Term Success Through Visibility & Alignment

ARC® Facilities

KEY OUTCOMES FOR SUCCESS

Long-Term Communication & Transparency
Across the entire organization

Full Visibility
To all historical building changes

Easy to Use
Adopted by teams in the field and office

All Departments Aligned
Working from the same information



Accurate Data = Master Planning Accuracy

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Q & A

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