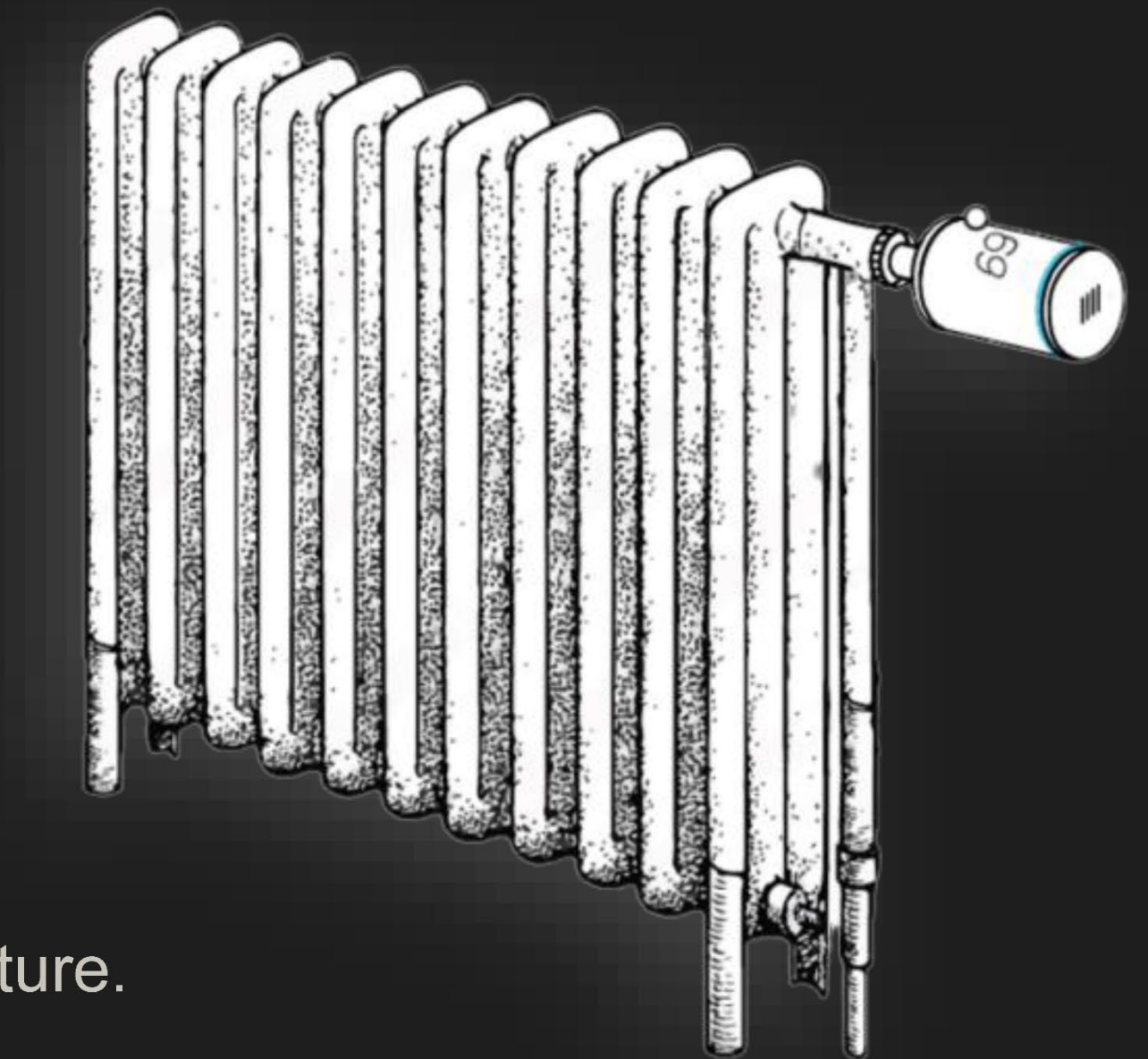




MODERNIZING LEGACY STEAM

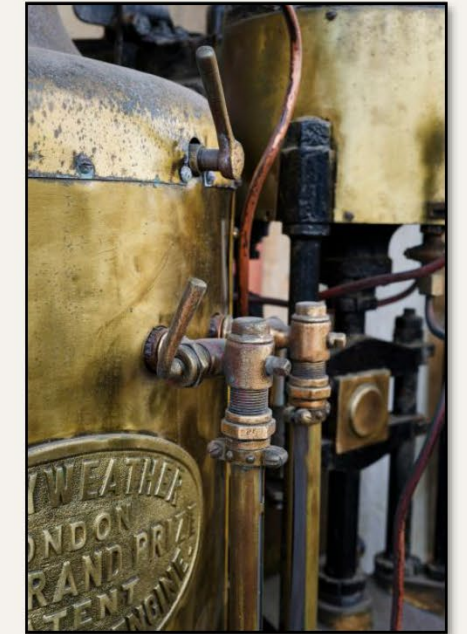
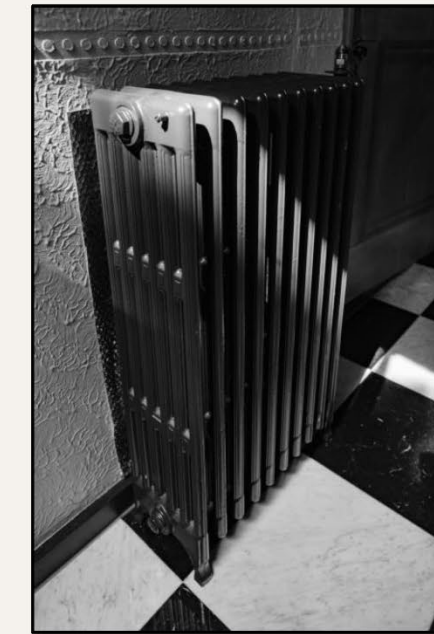
SMART RADIATOR THERMOSTAT

ARC modernizes North America's legacy steam heat infrastructure.
A patent-pending wireless controller that retrofits steam radiators.



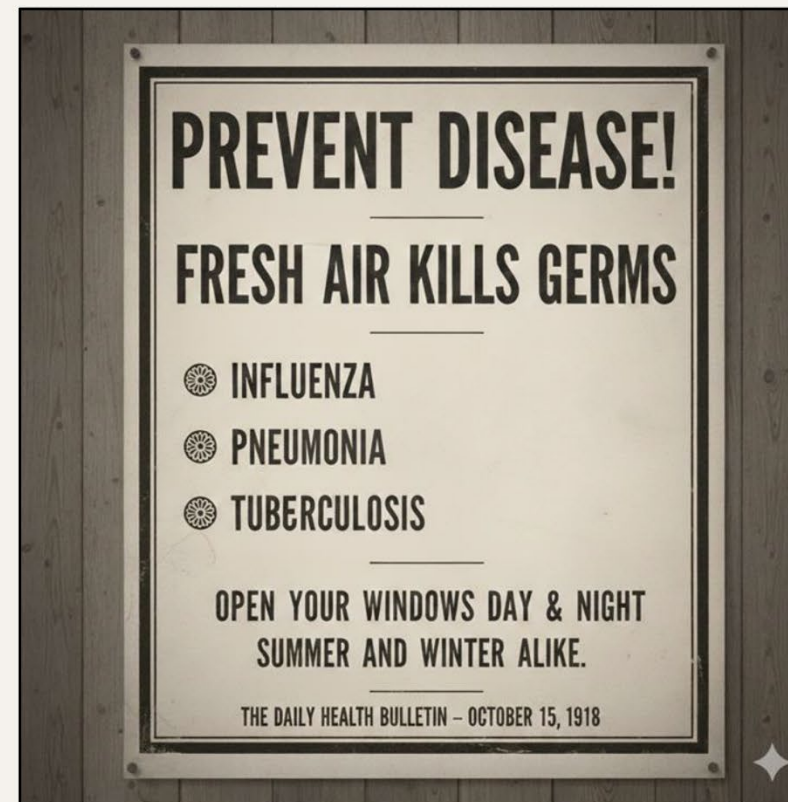
THE PROBLEM

- ~24 million buildings rely on steam heating
- 73% of tenants chronically overheated;
- 63% still open windows in mid-winter².



... WAS ONCE THE SOLUTION!

- Most windows kept open during 1918 pandemic
- Oversized radiators built to compensate for the cold



References

¹ Holohan, Dan. *The Lost Art of Steam Heating* (1992)

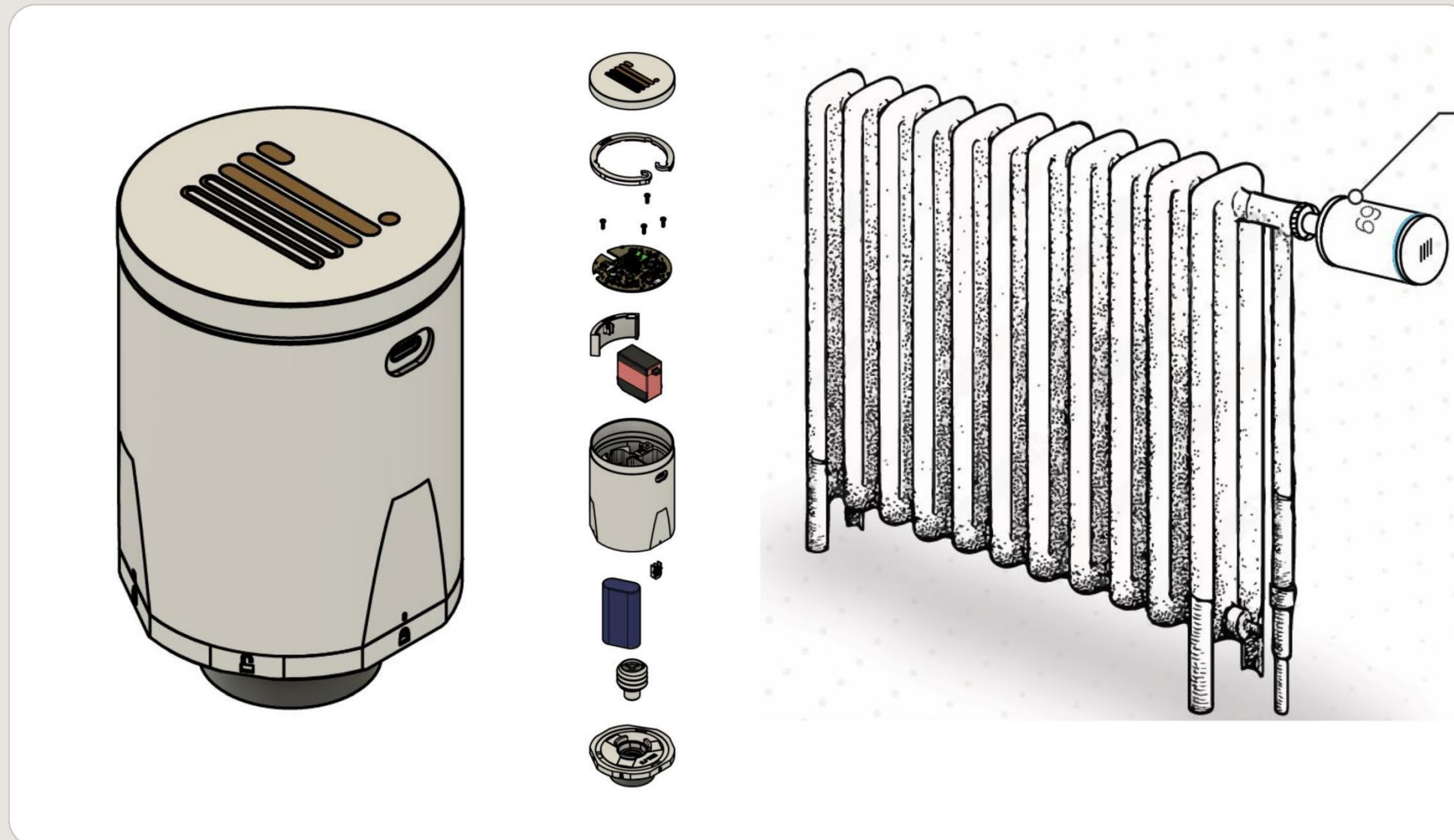
² Urban Green Council, "Demystifying Steam" Report (2019)

³ New York State Energy Research and Development Authority

THE SOLUTION

ARC: Automatic Radiator Controller

A wireless battery-operated controller that replaces the manual control on existing steam radiators - no wiring, no plumbing.



PRODUCT RENDER · ARC



BUILT FOR STEAM

Engineered specifically to overcome steam-valve backpressure of over 15psi at 250°F.



6+ MONTHS PER CHARGE

Rechargeable Li-ion battery designed to last a full heating season



THREADS ON IN MINUTES

Quick install with no plumbing or wiring. Tactile knob and LED display for controls

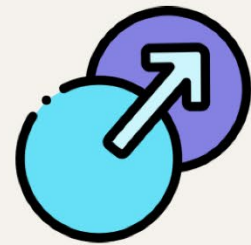


SECURE WIRELESS COMMUNICATION

Sub-GHz radio signals with up to 1,000 ft range without requiring Wi-Fi. Local first, secured and private.

LOCAL ROOTS

FROM RESEARCH TO REALITY



Successfully transitioned from an academic project at Illinois Tech to a student-led startup, Radiator Revivers LLC.

ILLINOIS TECH



- ✓ **Peoples Gas Innovation Award —**
Innovation Strategies & Technologies
- ✓ **Provisional patent filed —** converting
to full utility patent
- ✓ **IP extends beyond steam —**
hydronic, chilled water, radiant &
industrial flow control

PILOT STUDIES RESULTS

2019-2020 Gen I pilot

- 95+ devices
- 63% reduction in radiator usage
- Increased occupant comfort

2025-2026 Gen II Pilot

- 50+ devices
- Deployed in University of Chicago, Chicago Public Schools, Illinois Tech
- Fully automated setbacks
- Real-time data monitoring and control dashboards



STRATEGIC NEXT STEPS

Our Vision is to get BORC into the hands of everyone who can benefit from it

TECHNOLOGY ADVANCEMENT

- Optimize design for manufacturing at scale
- Compliance testing & certification
- Building management system integration



ENERGY EFFICIENCY PROGRAM INTEGRATION

- Savings methodology by building type
- Quantify non-energy benefits
- Energy usage and compliance reporting



PARTNERSHIPS

- Made possible thanks to support from the **Peoples Gas and North Shore Gas Energy Efficiency Programs**
- Exploring additional partnership opportunities



ENGINEERING EXPERTISE

MEET THE TEAM



Dr. Akram Syed Ali
Ph.D. Architectural Engineering



Dr. Mohammad Heidarinejad
Ph.D. Mechanical Engineering



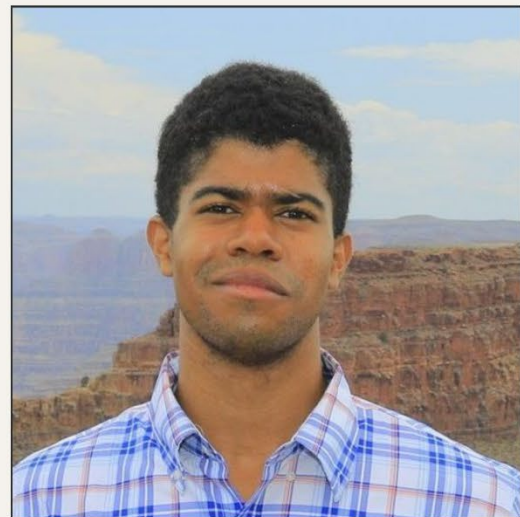
Dr. Brent Stephens
Ph.D. Civil Engineering

The Built Environment Research Group

advancing energy, environmental, and sustainability
research within the built environment
at Illinois Institute of Technology



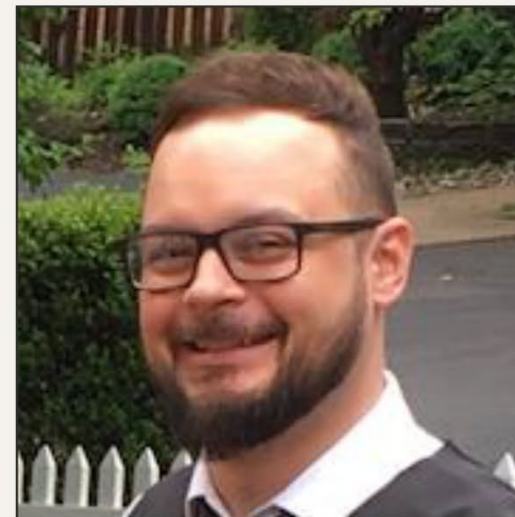
ILLINOIS TECH



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Thank you for listening!



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