RETRO-CX WITH CHIEFS:

TRAINING OPERATORS TO SUSTAIN THE PROCESS

BUILDINGS THAT LEARN – THE ROLE OF OPERATORS

- Building operators negotiate between users, technologies and the building, and thus, their understanding of and knowledge about the building is vital for reaching goals of energy efficiency.
  - *Margrethe Aune & Robert Bye*

OPERATIONS (PAST)

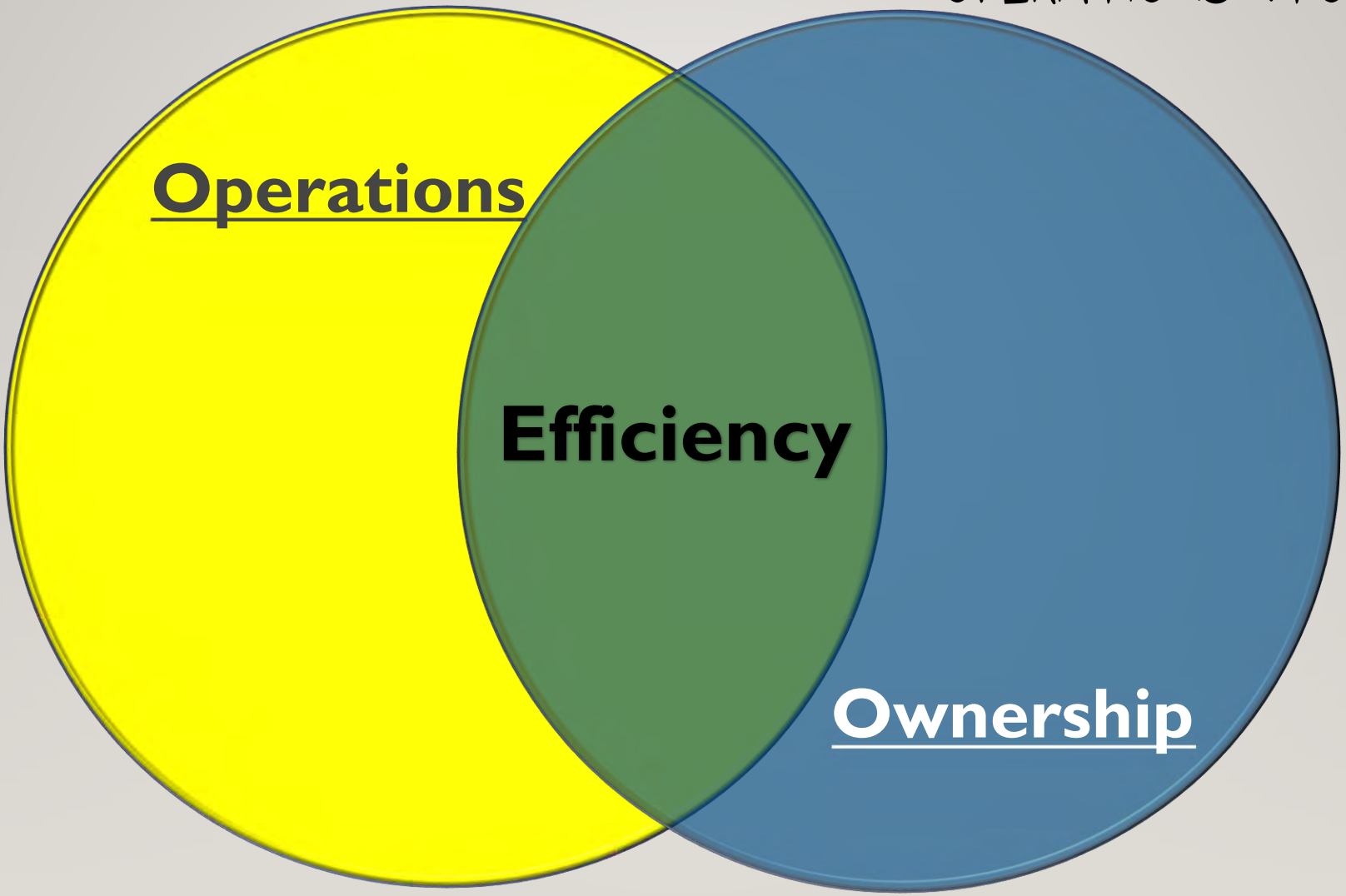
Operations:

- Occupant Focus
- Respond to comfort complaints
- Repair of & maintenance on existing systems

Ownership

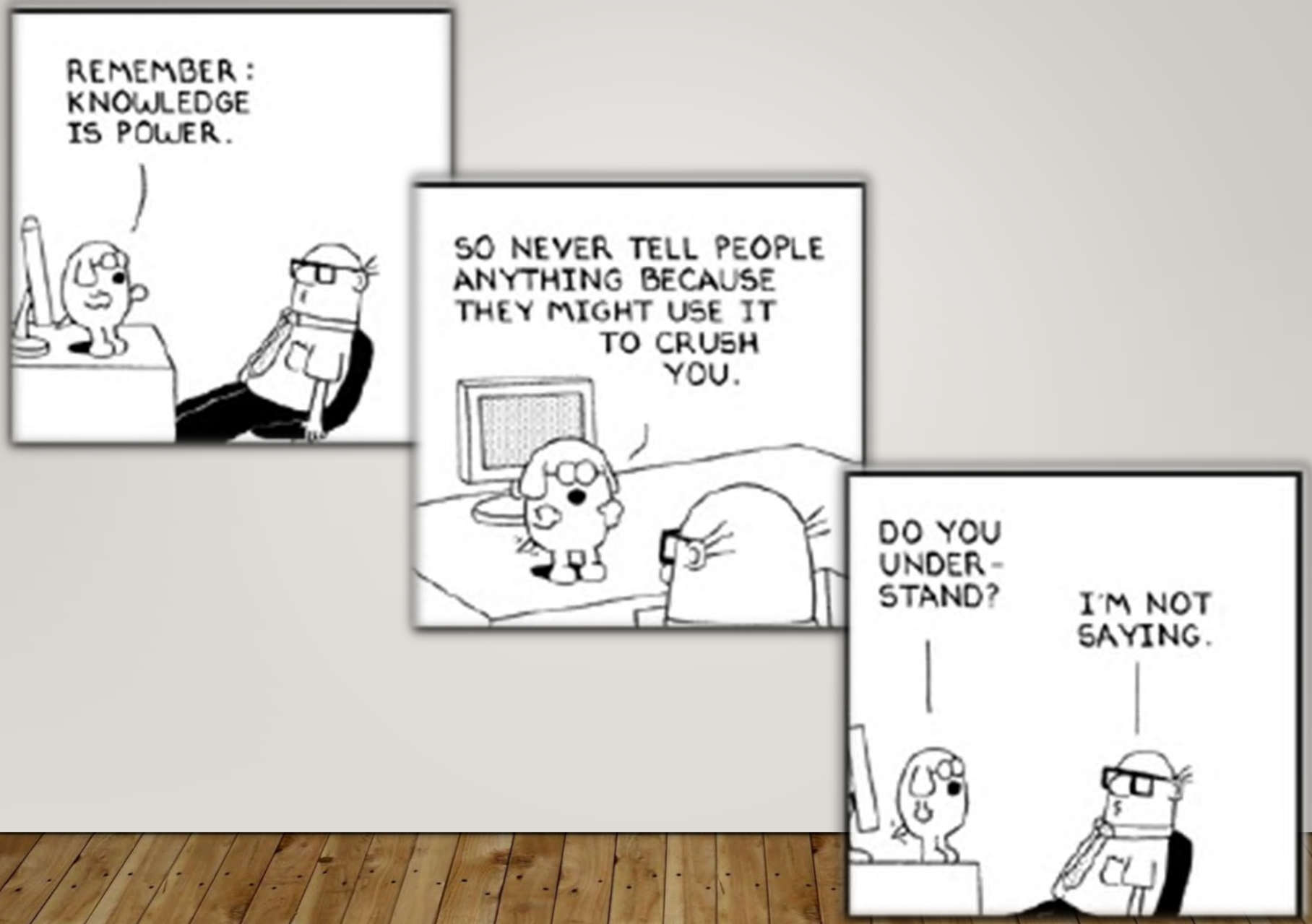
- Bottom Line Focus
- Avoid cost increases
- Variance Based
- Vacancy

OPERATIONS (TODAY)



RETRO-CX MILESTONES

- Site orientation & documentation review
- Define the Current Facility Requirements (CFR)
- Energy Analysis / Benchmarking
- Trending/ Data logging
- Design/ Installation reviews (DIRs)
- Functional checks (FCs)
- Performance tests (PTs)
- Reporting & Issue Resolution
- Persistence Strategy

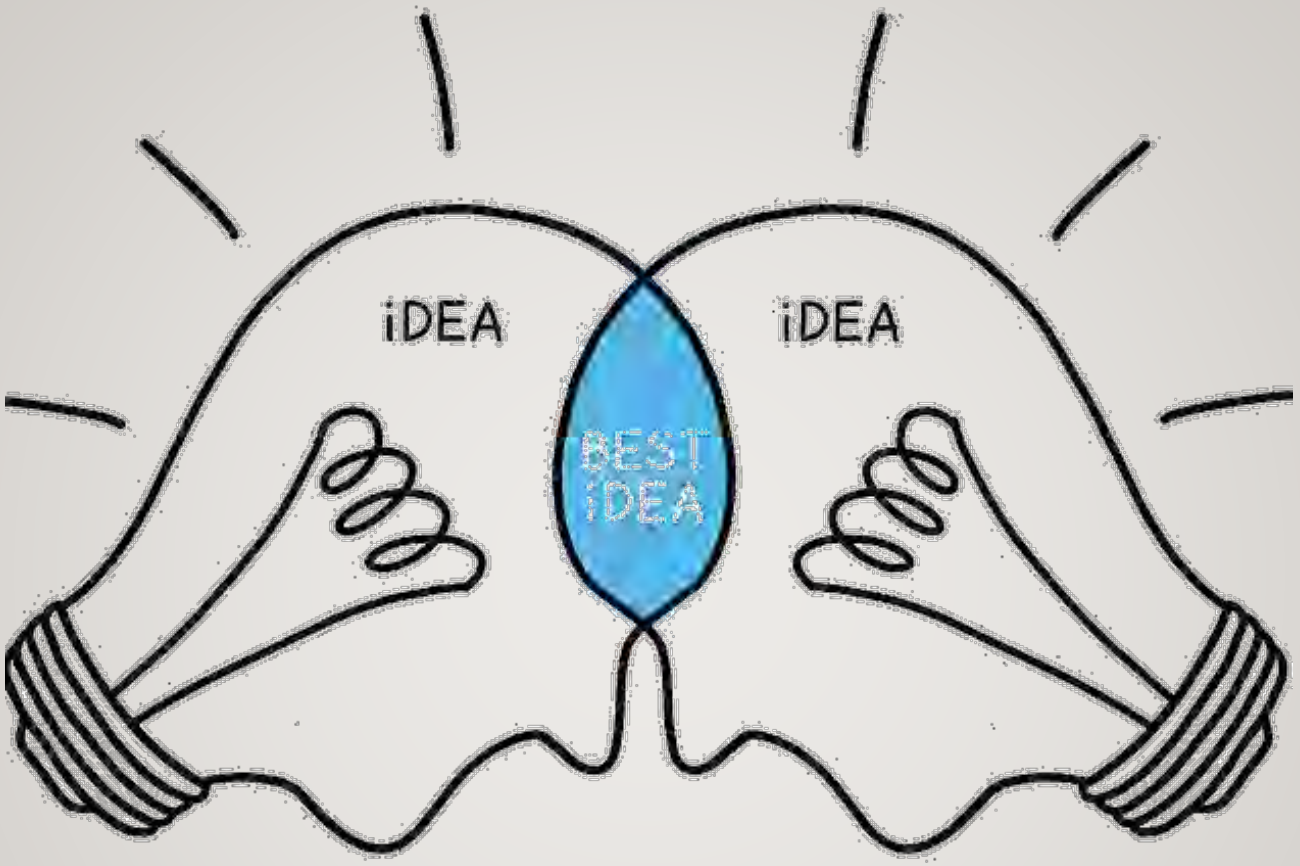

REMEMBER: KNOWLEDGE IS POWER.
SO NEVER TELL PEOPLE ANYTHING BECAUSE THEY MIGHT USE IT TO CRUSH YOU.
DO YOU UNDER-STAND?
I'M NOT SAYING.

"Teamwork begins by building **trust**. And the only way to do that is to overcome our need for **invulnerability**."

Patrick Lencioni

"NEVER
MISS A
GOOD
CHANCE
TO
SHUT UP."
...will rogers

Listening
=
Learning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RESULTS OF GOOD COMMUNICATION

- Occupants & Usage
- Environment to be Achieved
- Planned / Unplanned Capital Expenses
- Utility Budget / Management
- Operating Schedules / Strategies
- Setpoints & Resets
- Seasonal Constraints
- Past Experiences (Successes & Failures)
  - Information vs. Knowledge

A rising tides lifts
all the little boats

"Many ideas grow better when transplanted into another mind than the one where they sprang up."

Oliver Wendell Holmes

"8 ½ X 11 GLOSSIES"

- Involvement in Project Development
  - Aware of existing building issues & common problems
- Can often develop a list of potential improvement
  - Help focus the analysis
- Sustain improvements after resolution & implementation
  - Know what can and will be done…
  - Is it worth doing?

If everyone is moving forward together, then success takes care of itself.

Henry Ford

INVOLVED IN PROJECT IMPLEMENTATION

- How will I maintain this?
- Where do I get spare parts?
- How do I use this now?
- What mode is it supposed to be in?
- What about when this happens?

- Forget this, I'm putting it in hand…

" Our overall impression from the data is that end-users in buildings seldom hamper the process of making buildings energy efficient.

More common challenges are the small socio-technological adjustments that are necessary in order to make the building work and make the end-users satisfied.

Building operators are in many ways what we can call 'super-users' in the sense that they mediate between the buildings and the users."

We're still talking about Retro-Cx right?

SUSTAINING KNOWLEDGE

- BINDER & SYSTEMS MANUAL
  - 20-30% of our time searching for information
- RCX PLAN
  - Test Sheets
- PERSISTANCE PLANNING
  - Improve efficiency and encourage communication
- TRAINING PROGRAM
  - High turnover
  - Leverage wisdom to prevent re-inventing the wheel

"YOU ARE NOT A TRUE SUCCESS **UNLESS YOU'RE** HELPING OTHERS BE SUCCESSFUL"