Effective Communications in Cx

Eileen Westervelt, SEDAC
AIA Quality Assurance

The Building Commissioning Association is a Registered Provider with The American Institute of Architects Continuing Education Systems (AIA/CES). Credit(s) earned on completion of this program will be reported to AIA/CES for AIA members. Certificates of the Completion for both AIA members and non-AIA members are available upon request.

This program is registered with AIA/CES for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.
1. Identify the risks of miscommunications in the existing building process.
2. Identify common pitfalls in communications and apply methods for effective outcomes.
3. Discuss red flag language that demands clarification.
4. Phrase what you want to say in a diplomatic manner to lessen the chances of contracting foot-in-mouth disease.
Who is with us today?

- Cx service providers – NC, EB
- Controls contractors
- Building operators
- Architects/Designers
- Building owners/ administrators
- Researchers/students
- Educators
- Vendors
- Building occupants
- Others?
Game Plan
What’s in Your Quiver?

• Build on imperative to address human side of RCx
• Share my observations on communications
• Request audience input

Let’s broaden perspectives
And add to our ready quiver of responses
Backstory:

Human Side of Retro-Commissioning – ppt & paper

- 20 pg paper (and ppt) - BCxA website in NCBC 2014 proceedings
- Picked up by AEE SPEE journal winter 2015
- Topics include:
  - Recognizing People as Part of the Energy System
  - Establishing a Broad Spectrum Team
  - Discussing Objectives and Priorities
  - Building Relationships
  - Improving Communications
  - Establishing New Behaviors
More than a Technical Solution for Energy Optimization

- Assumed Energy System: Physical-Mechanical

- Actual Energy System: Physical-Mechanical-Human

All sides interact and affect each other. The human side needs to be addressed for success. Communications is a key part of the human side.
Communications needed in workplace

Top 6 Soft Skills according to...

*ASME Survey: Communications is ‘Crucial’ for Engineers

Soft Skills for Engineers:
- Communications*
- Creativity
- Adaptability
- Collaboration
- Leadership

Soft = Hard to Quantify
People Skills

Affect how we relate to and interact with others

Sources:
Executive Perceptions of the top 10 soft skills needed in today’s workplace
Business Communications Quarterly, vol. 75, no. 4

http://alearningblog.net/category/soft-skill/
http://news.thomasnet.com
Communications with a Purpose

- Sending and Receiving information to and from others
  - Effectively, Efficiently, Respectfully
- Transferring Ideas – Two Way Street
  - **Spoken** Communications:
    - Speaking + Listening
    - Face-to-Face, on phone
  - **Written** Communications: emails, letters, reports, e-files
  - **Observational** Communications – visiting, interacting w/ equipment, *show and tell*
    - (other Non-Verbal – such as body language, *discuss later*)

*Purpose:*

- Enabling people to act in complementary fashion
- Get to Optimized Energy Performance that Persists
Communication: A Learn-on-the-Job soft skill

We succeed by:

a. Observing and implementing the techniques of others.
b. Luck
c. Books (*Not as bad as learning dancing by the book*)
d. Training
e. Trial and error w/ dogged determination to the outcome

It’s better in-person
If you were writing Communications for Cx - 101, what would you include?

- Risks of misunderstanding
- Causes
- Ways to support effective discussion
- Words that need clarification
- Methods to enhance communications – *tips and story time*
Consequence of miscommunication: invoice paid on incomplete work

**Miscommunicated Scope of Work**

- Prepared a description of the needed work:
  - Establish reliable communications, set up zones, schedule equipment
- Discussed in person w/ controls contractor who bid job.
- Discussed potential trouble shooting approach.
- When job reported complete: no reliability, no zones, no schedules.
- Did find that cabling had been checked & software updated..

![Data Gaps During Network Outages](image-url)
Miscommunicated Scope of Work - Resolution

- Suggested misunderstanding of language and objective
- Met in person, showed data gaps, panel failures.
- When verification procedures understood, end to end checks occurred.
- Great success story!
Miscommunicated Scope of Work - Summary

Consequence of Miscommunication:

• Invoice paid on incomplete work
• Savings not realized

What worked:

• Presuming the best intentions
• Meeting in person
• Clarifying language
• Show and tell
• Articulating desired outcomes
What has been the results of miscommunications?
What’s at Risk? What could go wrong? What are the consequences?

- Invoices paid on incomplete work
- 
- 
- 

Potential risks make the effort of communications worthwhile
So what could go wrong?

… a lot (a variety of unfortunate outcomes)

- Invoices paid on incomplete work
- Building Automation Systems disabled
- Building comfort unattainable
- Resources wasted on excess energy use, unproductive staff time
- Unrealized expectations for stakeholders
- Suboptimal building performance

Potential risks make the effort of communications worthwhile
What are the pitfalls to effective communications?

What are some causes, mindsets, drivers that can lead to misunderstanding?
How could this happen? Why did this happen?

- Busyness
- •
- •
- •

Knowing the pitfalls can help avoid unfortunate outcomes
How could this happen?

- Busyness – too much going on
- Wanting to appear right, smart (instead be approachable)
- Assuming your/their language is understood. We all have different backgrounds.
- Assuming you will remember.
- Assuming others will ask if they don’t understand.
- Assuming others know what you know.
- Assuming technical solutions are sufficient – humans need to be incorporated into solution.

Knowing the pitfalls can help avoid unfortunate outcomes
Methods for Effective Communications

1. Support healthy **discussions**/interactions
2. Make it simple to **discuss**
3. During **discussion**
   make sure what was heard is what was meant
4. Apply proven methods for desired outcomes
   - In-person, show-and-tell, positive framing, results focused
Methods for Effective Communications

1. Support healthy discussions/interactions
2. Make it simple to discuss
3. During discussion
   make sure what was heard is what was meant
4. Apply proven methods for desired outcomes
   - In-person, show-and-tell, positive framing, outcomes focused
1. Support Effective Discussions/ Interactions

My best tips:

a. Bring People Together
b. Listen, reflect, clarify, summarize
c. Be the go-between
d. Repeat (the details) as often as needed
e. Write it down
1. Support Effective Discussions/Interactions

a. Bring People Together

- **Multiple contractors to troubleshoot system that interact**
  - Not a finger pointing match, a path to success
- **Multiple departments on one campus together**
  - Facilities Services & Information Technology
    - F&S needs to address the heat of computers
    - Contact IT directly, then invite to joint meetings, loop in on group emails.
    - Send site visit notes to all.
- **Having people sit in same room at same time:**
  - Aware of each other and their activities
  - Fosters a sense of shared purpose and teamwork
  - Hearing, seeing, questioning face-to-face more thorough and expeditious
- **Make the interactions supportive, respectful, non-threatening.**
  - We all have information and insights that can support success
  - No one person has all the info – want to leverage our collective knowledge
1. Support Effective Discussions/Interactions
b. Listen, Reflect Back, Clarify and Summarize

- **Use their words, then paraphrase**
  - Can be scary, humorous, serendipitous Ex: “Love potion”

- **Clarification:**
  - Check word meaning
  - What I heard was…
  - Does that make sense?
  - Did I get that right?
  - What did I miss?
  - What do you think?

- **Ideally, ALL parties do the listen, reflect, clarify, but…**
  - Engineers and equipment operators not big talkers
  - Self selected to work with equations and machines
1. Support Effective Discussions/ Interactions

c. Be the go-between

• Talk for non-talkers
• Share ideas as your own
  − Dare to look stupid, to keep discussion going
• Don’t be thrown by Smarty Pants Engineers
  − Some tech people can act a little intimidating
• Example BAS and UV Networking Issue:
  Controls contractors stumped
  Got manufacturer’s support
  Set up phone conferences
  Presented contractors ideas as mine
  Took flak for my ignorance
  Had tech support stand by during troubleshooting visit

  *Key finds*: we had the wrong manual
  Long standing ideas were wrong- local potentiometers disabled w/ BAS connection
  Needed to send setpoints and setbacks from BAS and repeatedly resend every few minutes.

  Later, tech support asked for my notes- the issue happened elsewhere
1. Support Effective Discussions/ Interactions

d. Repeat (the details) as often as needed
   - People can’t take everything in all at once
   - No value in “I already told you that.”

e. Write it down
   - Summarize key points of calls/meeting in writing.
   - We think we will remember- we don’t
   - This will give people a chance to correct/comment
1. Support Effective Discussions/ Interactions

Let’s elaborate or expand the list – How do you support effective discussion?

a. Bring People Together
b. Listen, reflect, clarify, summarize
c. Be the go between
d. Repeat details as needed
e. Write it down
f. 
g. 
h.
1. Support healthy discussions/interactions
2. Make it simple to discuss
3. During discussion
   make sure what was heard is what was meant
4. Apply proven methods for desired outcomes
   - In-person, show-and-tell, positive framing, results focused
2. Make it Simple to Discuss

a. Establish lines of communications
   - Send contact list
   - Group email
   - Set up remote access to BAS for self and others (VPN)
   - Set up desktop share of BAS (tight VNC)
   - Centralized file server (Box, or their server)

b. Distill Language – less is more
   - Direct, to the point emails, make it easy- subject lines, highlight keywords,
   - yes/no, multiple choice

c. Provide Language – more is more
   - Help clients describe efforts to boss, BOD, contractors
   - Turn ideas into action w/ succinct paragraph, compelling graph, bulleted list

Communication lines and massaged language make it simple
Methods for Effective Communications

1. Support healthy discussions/interactions
2. Make it simple to discuss
3. During discussion
   make sure what was heard is what was meant
4. Apply proven methods for desired outcomes
   - In-person, show-and-tell, positive framing, results focused
3. Make sure what was heard, was meant
Language needs clarification

- Roof top unit
- Hot water boiler
- Primary/secondary loop
- Midnight

Hear what they are trying to tell you with their words.
3. Make sure what was heard, was meant

What words need clarification?

- 
- 
- 

Hear what they are trying to tell you with their words.
Methods for Effective Communications

1. Support healthy **discussions**/interactions
2. Make it simple to **discuss**
3. During **discussion**
   make sure what was heard is what was meant
4. Apply proven methods for desired outcomes
   - In-person, show-and-tell, positive framing, results focused
The Missing Workstation

• Recommended new PC for central station.
  − Features discussed. Decision timing- next month, many group emails
• Meanwhile RCx full throttle:
  − w/ data logging, trouble shooting, controls optimization, graphics upgrades.
• Accessing BAS many times/day.
• When connections failed – asked for power cycle, but unit missing!
• IT “frugally” changed out disk and operating system,
• Stranded data, software upgrades, blocked access.
The Missing Workstation - Resolution

- First response - shocked and irritated.
  - Was common sense dismissed?
  - We had an agreed upon outcome and schedule.
  - Didn’t IT realize this would stop our work?
The Missing Workstation - Resolution
The Compliment Sandwich

Constructive Feedback or Request

- **Compliment**: Thank you for taking the initiative to upgrade. You really moved quickly.
- **Feedback**: We weren’t ready. This change stops our work until the controls tech can return in a month.
- **Request**: Please swap back the old disk
- **Compliment**: I appreciate your help.

Positive framing, results focused worked.
4. Apply proven methods for desired outcomes

- In-person
- Show-and-tell
- Positive framing
- Results focused
Positive framing for desired outcomes

- **Presume the best**
  - Everyone doing their best, well intentioned, meant to help
  - Legitimate misunderstanding,
    Looking at it differently. Understanding differently.

- **Avoid the attack**
  - Allow everyone to save face

- **Note the Positive**
  - Find the good, start w/ the good, end w/ the good

- **Focus on the Outcome**
  - Suggest a desired response to move toward shared goals.
How have miscommunications been resolved?

Stories/examples welcome!

What methods have worked to ease communications?

- 
- 
- 

Can you think of a horror story that caused you to adopt new behavior?

- 
- 
- 

NCBC 2015
Take Aways
For Effective Communications in Cx

• Communications is worth the effort
  o If you don’t have the skillset, get help
• Work with the people
  o Bring them together, in person is best
  o Listen, Reflect, Clarify, Summarize
  o Hear what they are trying to tell you with their words
  o Talk with them, for them, between them, as needed
• Show and tell works.
• Positive framing works miracles.
Eileen Westervelt
Program Director, RCx
UIUC Smart Energy Design Assistance Center
everesterv@illinois.edu
www.sedac.org

Eileen Westervelt
Energy Advisor, Retro-Commissioning
Westervelt Engineering
eileen.westervelt@gmail.com