



Effective Communications in Cx

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AIA Quality Assurance



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Learning Objectives

1. Identify the risks of miscommunications in 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



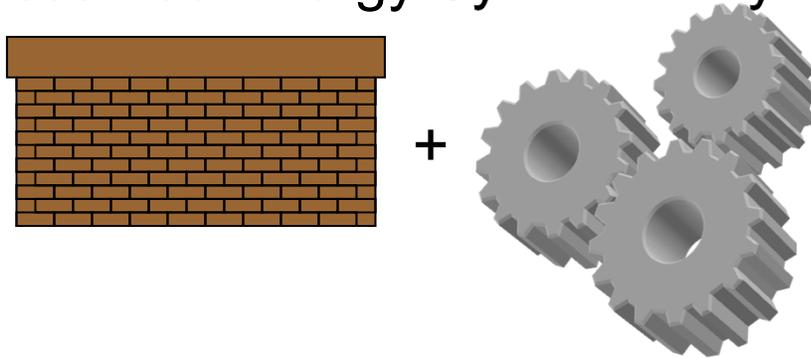
Backstory:

Human Side of Retro-Commissioning – ppt & paper

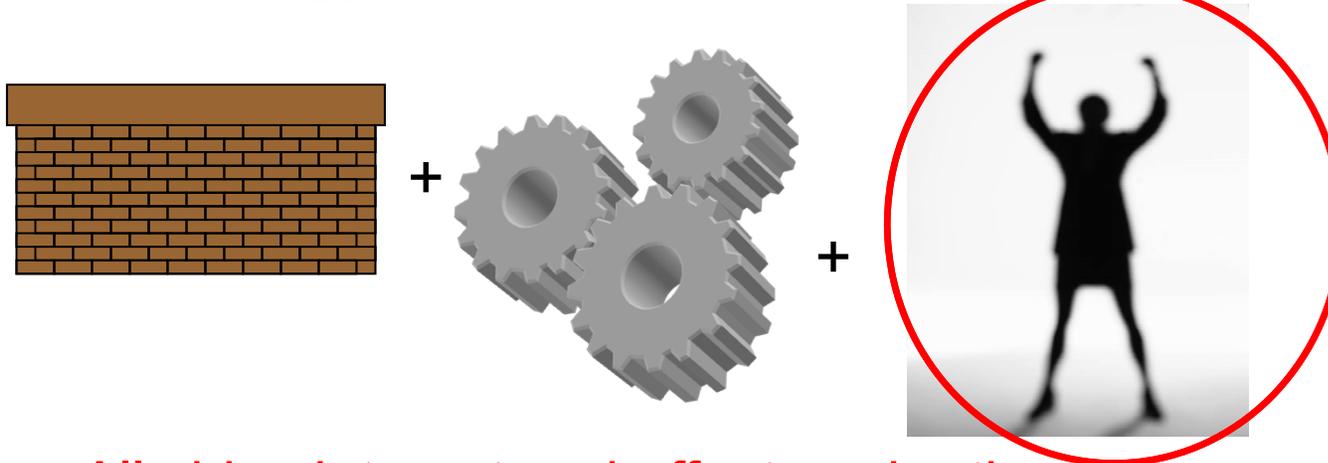
- 20 pg paper (and ppt) - BCxA website in NCBC 2014 proceedings
- Picked up by AEE SPEE journal winter 2015
- Topics include:
 - Recognizing People as Part of the Energy System
 - Establishing a Broad Spectrum Team
 - Discussing Objectives and Priorities
 - Building Relationships
 - Improving Communications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

...Business Executives

Integrity
 Communication
 Courtesy
 Accountability
 Interpersonal skills
 Positive attitude

teamwork was 7th

Communication
 Accountability
 Interpersonal skills
 Decision making
 Teamwork
 Creativity

...Human Resources

Accountability
 Interpersonal skills
 Communication
 Teamwork
 Ethical values
 Decision making

and critical thinking

Communication
 Ethical values
 Diversity
 Teamwork

Time management
 Problem solving

...MBA Students

...Business Schools



Soft Skills for Engineers:

Communications*

Creativity
 Adaptability
 Collaboration
 Leadership

*ASME Survey: Communications is 'Crucial' for Engineers

Soft =
 Hard to Quantify
 People Skills

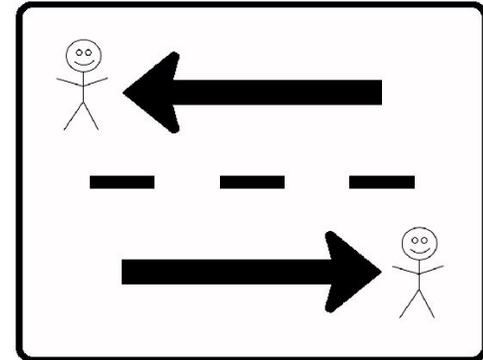
Affect how we relate to
 and interact w/ others

<http://alearningblog.net/category/soft-skills/>
<http://news.thomasnet.com>

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

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*)



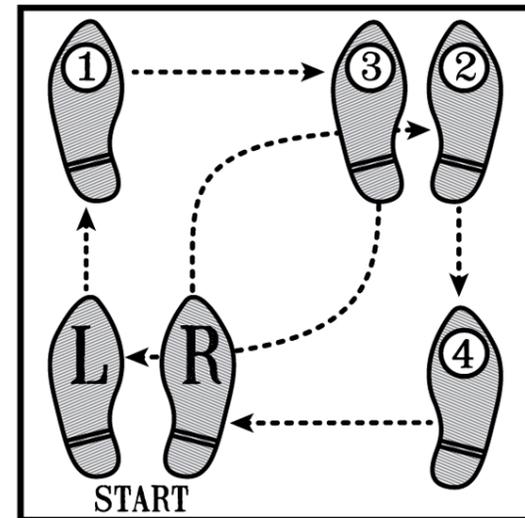
Purpose:

- 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:

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



BOX STEP

It's better in-person

If you were writing Communications for Cx - 101, what would you include?

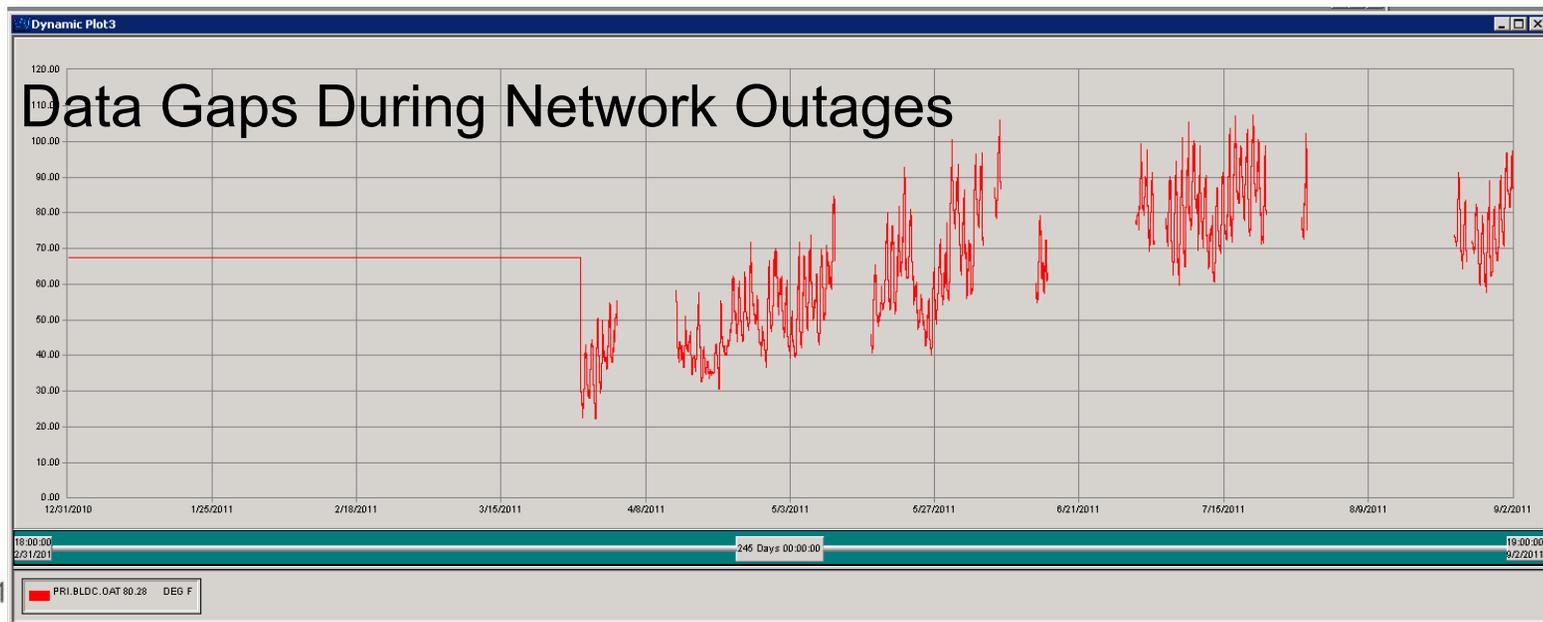


- Risks of misunderstanding
- Causes “
- Ways to support effective discussion
- Words that need clarification
- Methods to enhance communications – *tips and story time*

Consequence of miscommunication: invoice paid on incomplete work

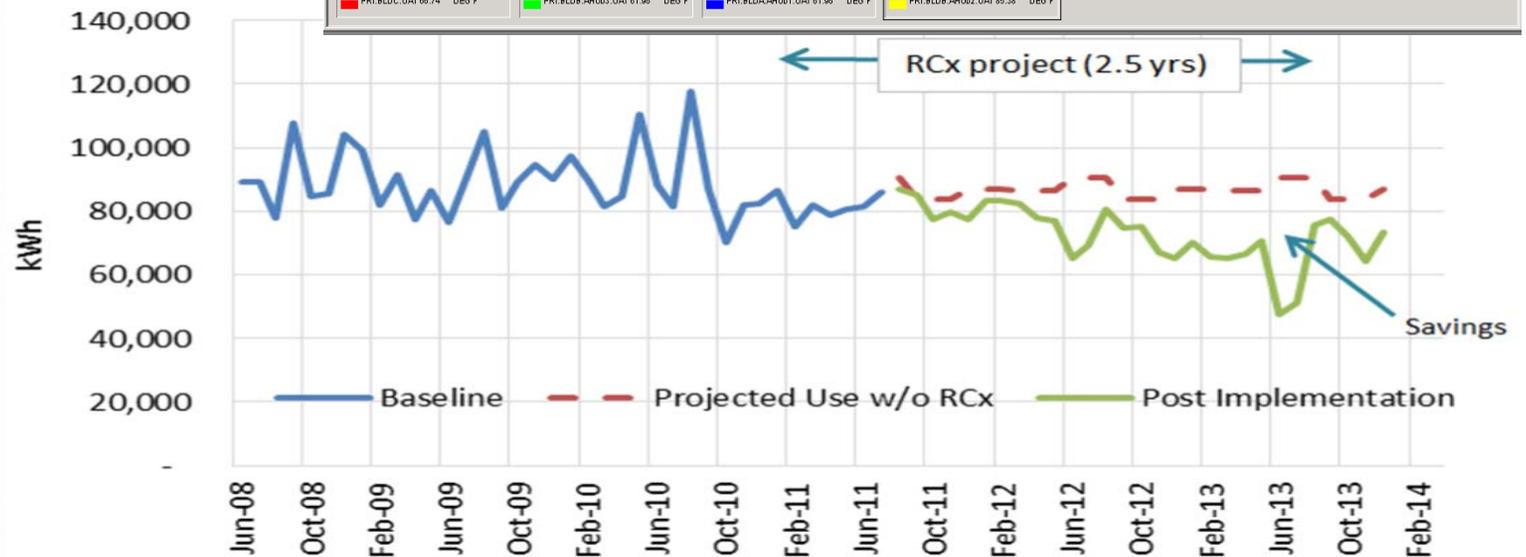
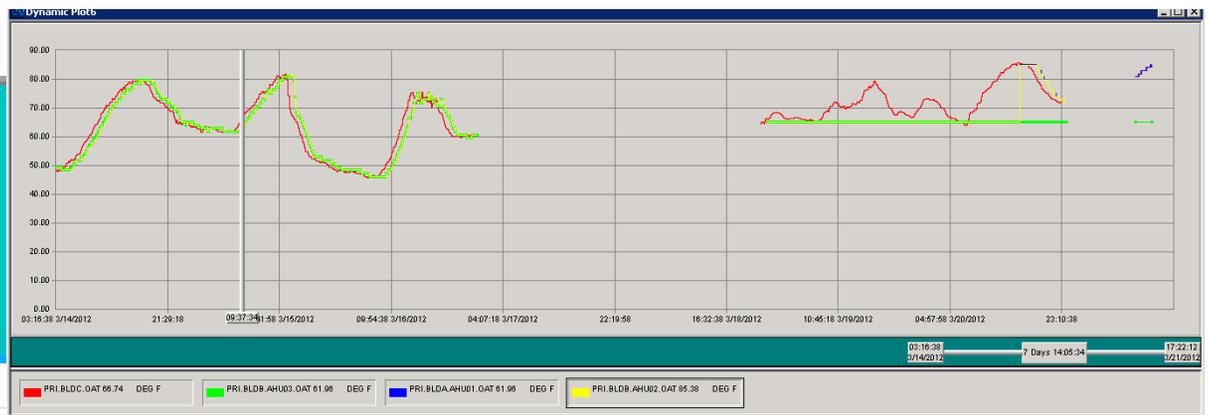
Miscommunicated Scope of Work

- 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..



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

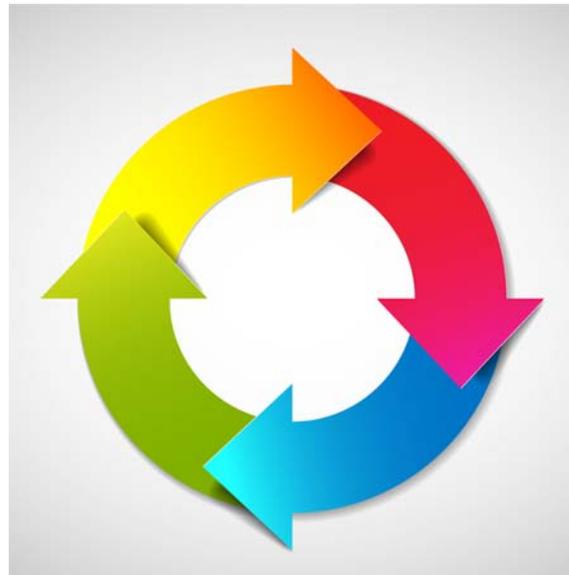
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1. Support Effective Discussions/ Interactions

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.



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



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

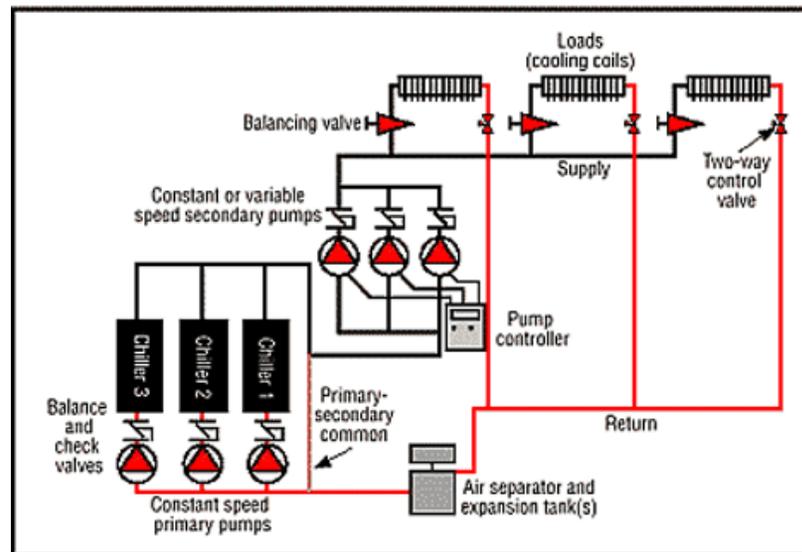
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3. Make sure what was heard, was meant

Language needs clarification

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

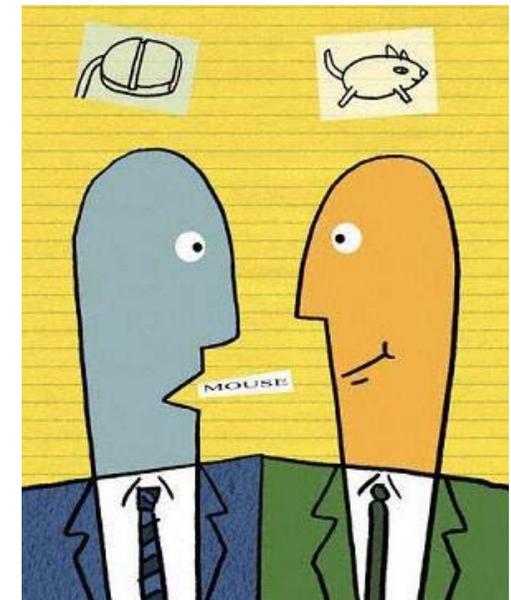


Hear what they are trying to tell you with their words.

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

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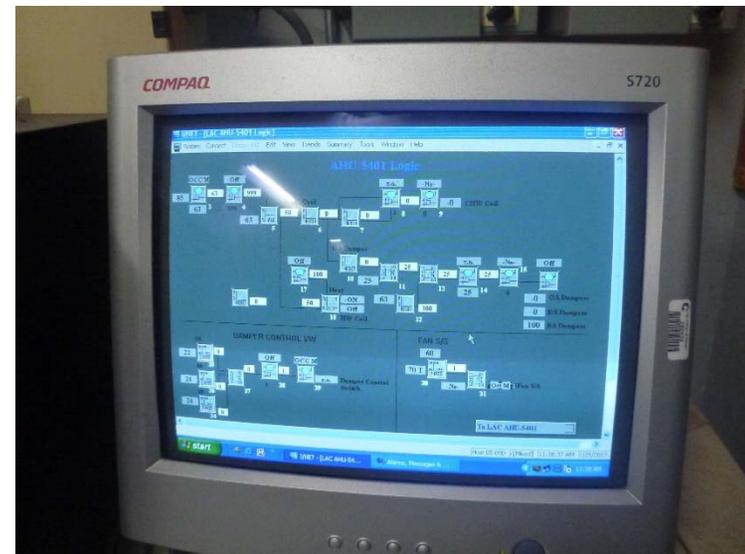
The Missing Workstation

- 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

Compliment →

Constructive Feedback or Request →

Compliment →



- **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.

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?

-
-
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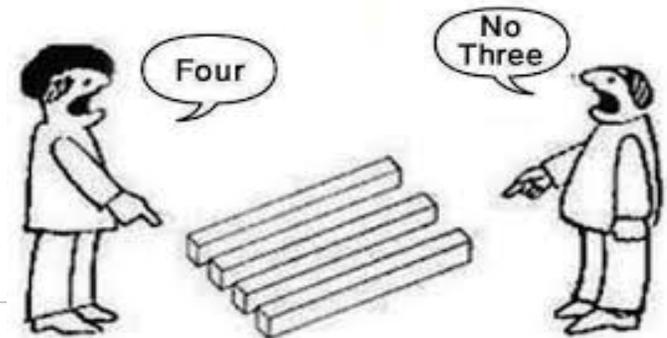


Take Aways

For Effective Communications in Cx

- **Communications is worth the effort**
 - If you don't have the skillset, get help
- **Work with the people**
 - Bring them together, in person is best
 - Listen, Reflect, Clarify, Summarize
 - Hear what they are trying to tell you with their words
 - Talk with them, for them, between them, as needed
- **Show and tell works.**
- **Positive framing works miracles.**

It is really confusing!!!





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