

Taking the Pain out of the Building Turn Over Process

March 9, 2023



 **BIMOC**[®] | Building
Maintenance
Optimization
Consultants

Credit(s) earned on completion of this course will be reported to American Institute of Architects (AIA) Continuing Education Session (CES) for AIA members.

Certificates of Completion for both AIA members and non-AIA members are available upon request.

This course 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.

AIA
Continuing
Education
Provider

Course Description

1. Organizations that own, operate, and maintain buildings frequently have the opportunity to move into brand new (or significantly renovated), state-of-the-art buildings. However, the turnover process of moving from the construction phase into the operational phase often tends to create much angst and trepidation among members of the facilities team who will be responsible for maintaining and operating the new building. This doesn't have to be the case if the building turnover process has been well planned and starts early.
2. This webinar is focused on the importance of recognizing, appreciating, and addressing the unique needs of the building's "end users" (e.g., maintenance techs, custodians, access control teams, safety and security teams, building controls techs, etc.) that tend to be overlooked by members of the design and construction teams. This presentation will suggest some ways, with proper planning, the turnover process can actually be exciting such that the future operators, maintainers (and future occupants) can't wait to "get the keys" to the building.
3. The presentation will identify key tasks from selecting the key stakeholders, hiring the additional labor required to operate and maintain the new building, developing and implementing the asset management program, selecting and purchasing the equipment needed to maintain the new building, managing warranties and maintenance agreements, etc.
4. The goal of this webinar is to provide useful information and guidance to help the facilities management organization streamline and optimize the turnover process focusing on the unique needs and challenges of the operational team stakeholders to eliminate (or at least reduce) the stress of moving into a new building that will need to be properly operated and maintained well after the design and construction teams have moved on.

Learning Objectives

1. Define what the process of “Building Turnover” means and discuss why the building turnover process needs to start as early as the design phase.
2. Identify the very unique needs of the members of the team that will be assigned to operate and maintain the building.
3. Identify all the key stakeholders that should be intimately involved with the planning of the turnover process.
4. Identify the major/critical tasks that should be part of the turnover planning process.
5. Discuss ways an organization could develop a team focused on planning and executing building turnover activities.

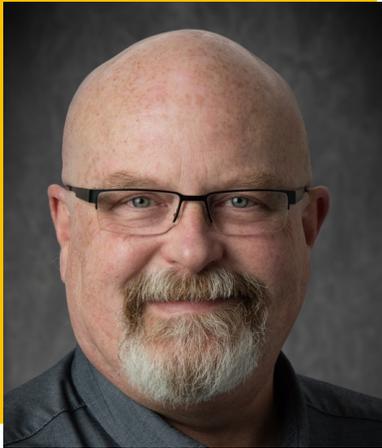
This concludes The American
Institute of Architects Continuing
Education Systems Course



Contents

1. Introduction
2. Setting The Stage
3. TOW Topics
4. Closing Comments
5. Q & A

PRESENTER



Doug Litwiller, PE, CEM
Business Development Manager
douglaspl@buildingmoc.com | 515.233.4400



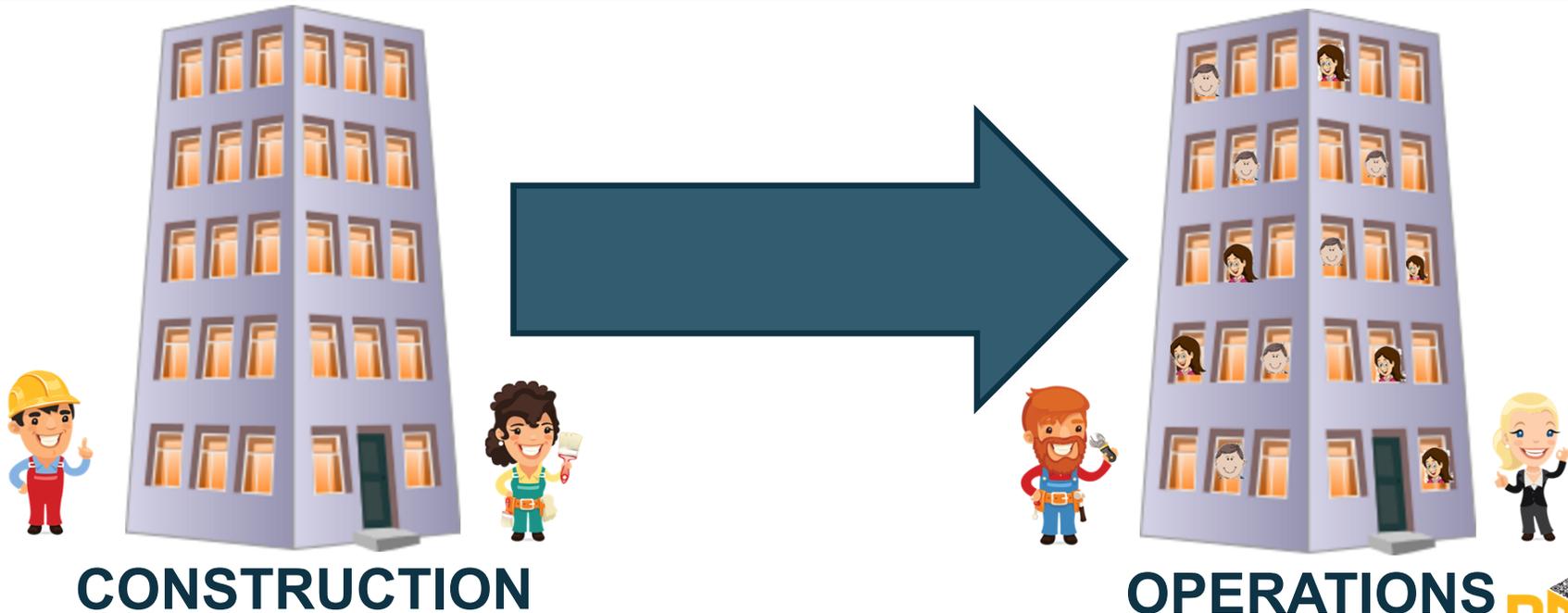
- Facilities management professional since 1981
- Extensive experience in facilities management, and energy management
- Has served higher education, healthcare, and investor-owned utilities

A photograph of a stage with red curtains. The curtains are illuminated from below, creating a warm, red glow. In the foreground, the silhouettes of several audience members are visible, looking towards the stage. A dark horizontal band is overlaid across the middle of the image, containing the text "SETTING THE STAGE" in white, bold, uppercase letters.

SETTING THE STAGE

DEFINITION OF THE BUILDING TURNOVER PROCESS

The planned and orderly process of holistically preparing a newly constructed building (or major renovation), the building operations team, and the building's future occupants for the eventual occupation and operation of the new building. (Lit's Definition)



Question #1

When does the turnover process start for your organization?

- A. Beginning of design
- B. Completion of design
- C. Start of construction
- D. Substantial completion
- E. Never

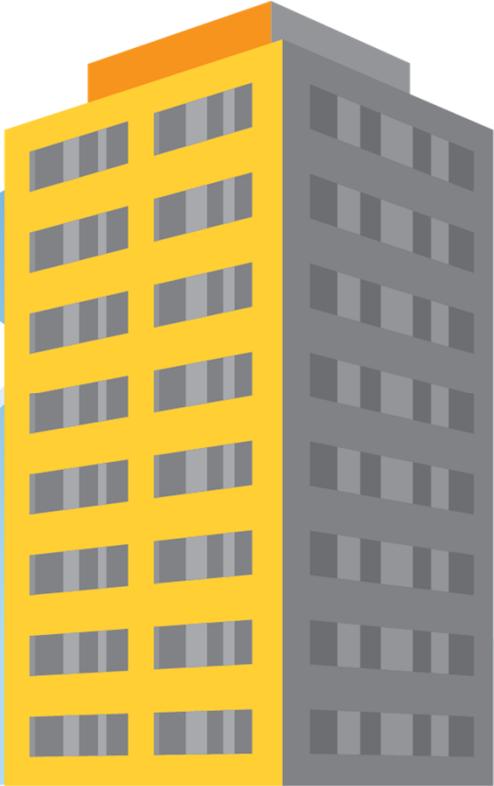
**NEED TO
SEARCH FOR A
BETTER WAY...**





TUNNEL VISION

TOW → TURNOVER WORKGROUP



TOW → TURNOVER WORKGROUP



The turnover process MUST be led by a key member representing the OPERATIONS team.

- ✓ It SHOULD NOT be delegated to a member of the project team.
- ✓ TOW is not the responsibility of the Design/Construction team.

Question #2

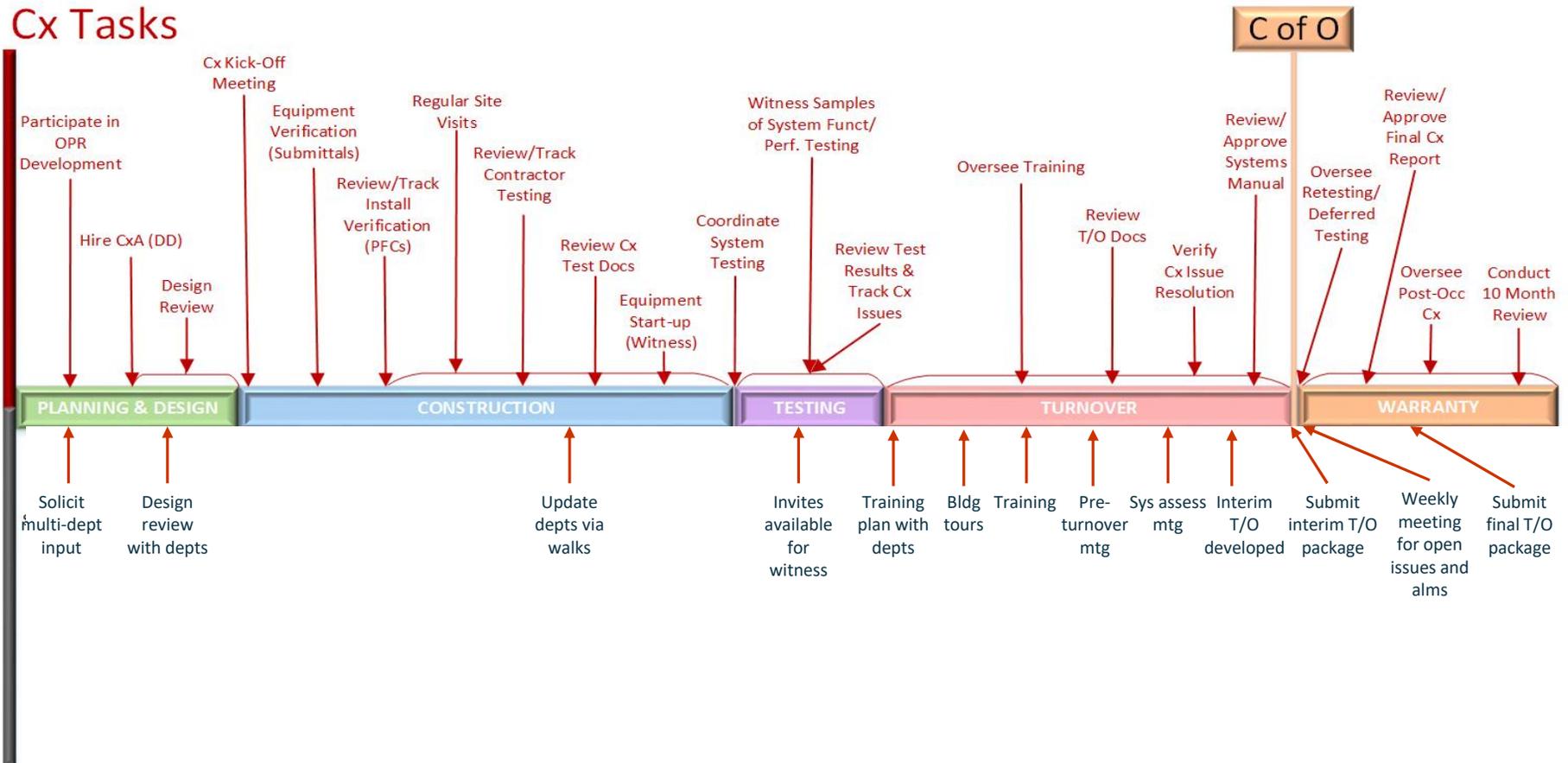
What is the greatest risk if the turnover is not done well?

- A. New assets suffer from lack of maintenance.
- B. Added costs for operation.
- C. Unforeseen problems.
- D. The technicians are poorly trained unable to work on the new assets.
- E. New occupants are unhappy
- F. No one knows any of the details on asset warranties, so the warranties are essentially nonexistent.
- G. The CMMS is incomplete so work orders cannot be created appended to the specific asset.
- H. All of the above

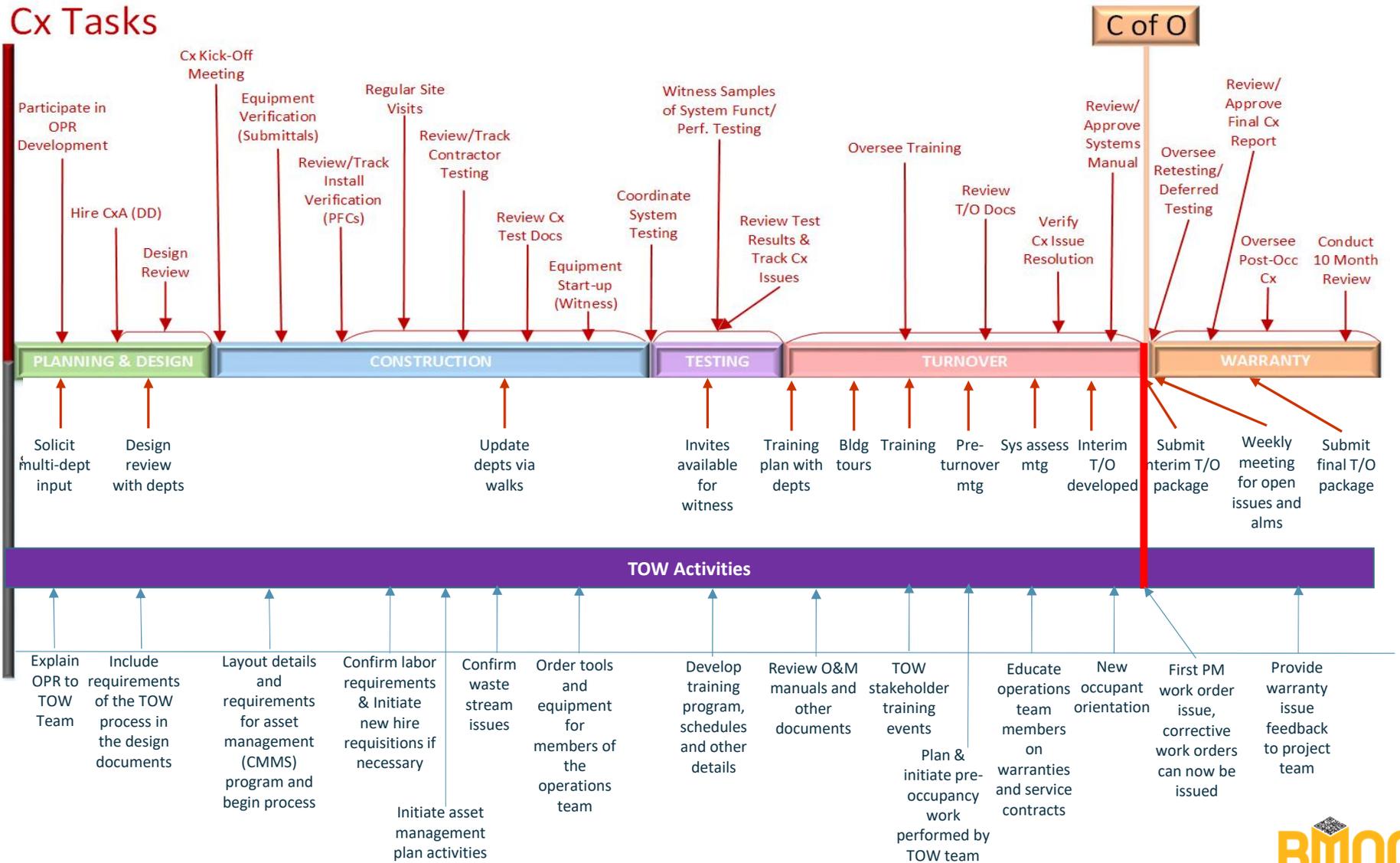


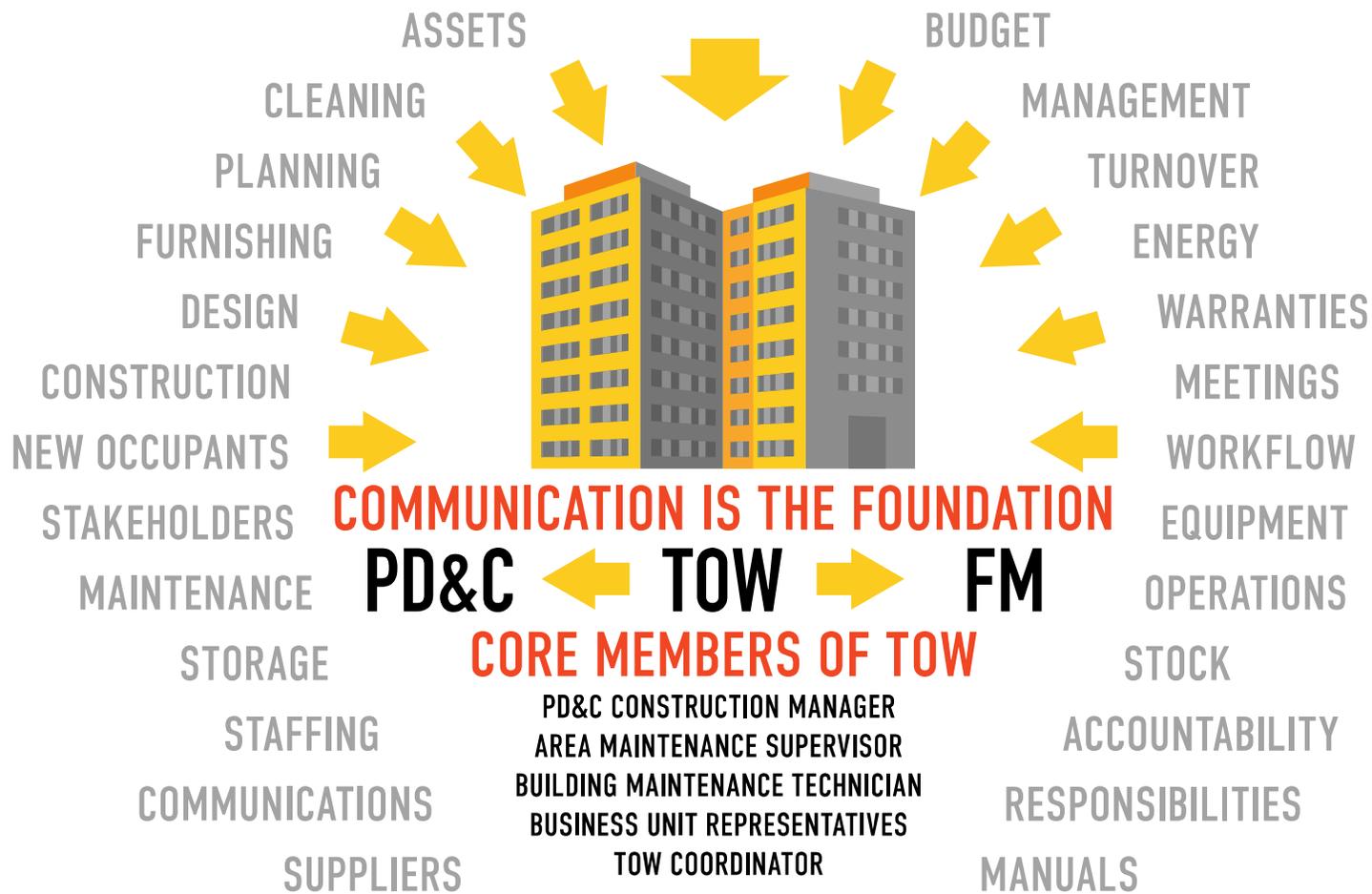
STAKEHOLDERS **BEFORE** AND **AFTER** TOW

Cx Tasks



Cx Tasks





BUILDING A SUCCESSFUL WORKGROUP

1. TOW should be led by a key member representing the **OPERATIONS** team.

- ✓ It SHOULD NOT be delegated to a member of the project team.
- ✓ TOW is not the responsibility of the Design/Construction team.

2. TOW should start early during the design phase.

3. TOW IS NOT duplicative of the regular project meetings.

- ✓ It is focused on planning for the eventual operations phase.
- ✓ It is a series of meetings and activities focused on the needs of the **OPERATIONS** team managed by **OPERATIONS** team stakeholders. Timing of the meetings – not weekly until maybe towards the end.

4. Management Support is Required:

- ✓ Limited success without it.

5. TOW IS NOT duplicative of the regular project meetings (repeated for emphasis).

- ✓ It is focused on planning for the eventual operations phase.
- ✓ It is a series of meetings and activities focused on the needs of the **OPERATIONS** team managed by **OPERATIONS** team stakeholders. Timing of the meetings – not weekly until maybe towards the end.

6. Hold Participants Accountable:

- ✓ Laser Focus: “**Who** (by name) is going to do **what** (specific deliverable) by **when** (specific date).”

7. Documentation:

- ✓ Recording detailed notes of meetings and distributing to TOW members within 48 hours of each meeting.

8. Focus on Preventing “Issues”:

- ✓ Always looking “two to three moves ahead”!
- ✓ The focus is always PROACTIVE, not REACTIVE!
- ✓ Anticipating “issues” early and dealing with them early!

9. Have the “right” stakeholders engaged at the “right” time

- ✓ Confirm we have the **right** stakeholders with the **right** information participating at the **right** time so we can make the **right** decisions!

10.TOW should be led by a key member representing the OPERATIONS team (repeated for emphasis).

- ✓ It SHOULD NOT be delegated to a member of the project team.
- ✓ TOW is not the responsibility of the Design/Construction team.

Question #3

Who should be involved in the turnover process? (multiple select)

- A. Custodial
- B. Maintenance
- C. Finance
- D. Work control team
- E. All the above

TOW Membership

Building Operations & Maintenance	Custodial	Construction Manager	Recycling & Refuse
Fire Protection & Fire Alarm	Building Controls	Key and Access Services	Sustainability
Landscape Services	Environmental Compliance	Environmental Health & Safety	
Work Control Center (Call Center)	Utilities Distribution	Energy Management	
IT Services	The “Customer”	TOW Coordinator	
FF&E Coordinator	Project Manager	Space Management	



TOW TOPICS

List of TOW Discussion Topics

TOW Opening Statement	<u>Existing</u> FM Operations Personnel	New Hires
Project Walk-Throughs	Custodial	Asset Management Program
FM Operations Team Training	New Occupant Orientation	New Tools & Equipment
Warranty Management & Service Contracts	Attic Stock Management	Safety
Waste and Recycling	Other Topics	

1. TOW Opening Statement:

- ✓ Stakeholders are reminded that they are expected to bring up issues through their unit structure for issues that cannot be satisfactorily addressed through the project channels.
- ✓ Date of Substantial Completion
- ✓ Date of Final Completion

2. Existing FM Operations Personnel:

- ✓ Who (by name) is going be involved in the operations of the building?
- ✓ What is their role and responsibilities and when do they need to get involved?



3. **NEW FM Operations Personnel (New Hires):**

- ✓ Custodial? Maintenance techs?
- ✓ Have the new positions been budgeted?
- ✓ When do they need to be on board?
- ✓ Who is going to be responsible for the preparing the new hire requisitions AND preparing the new hire?
- ✓ In a “perfect” world, this discussion needs to take place during the PLANNING of the building!

4. **Project Walk-Throughs:**

- ✓ When, who, documented issues, close the loop.
- ✓ Expectations of PWT participants
- ✓ What’s going to happen and what the protocol is when something is identified (PLANNING!)



5. Custodial/Waste/Recycling:

- ✓ Containers - Will they fit inside the new millwork?
- ✓ Who responsible for purchasing the containers (the operating budget or the project budget)?
- ✓ Maintenance of flooring and other finishes (like windows)
- ✓ Specialized cleaning solutions required?
- ✓ Specialized custodial tools needed?
- ✓ Location of exterior dumpsters
- ✓ Ordering long lead time custodial equipment
- ✓ Storage of equipment “pre-turnover”
- ✓ Confirm who will be responsible for the “final” preoccupancy cleaning
- ✓ Roll-around chairs – will the wheels leave marks on the floor?



6. Asset Management Program Development:

- ✓ Facilities Management, **NOT** the project team, needs to own this process!
- ✓ Confirm who will be responsible for this effort and who will performing the individual tasks? Will any of this work need to be outsourced?
- ✓ Start this discussion early in the design phase
- ✓ Goals:
 - ❖ First PM's come out the day the building is turned over!
 - ❖ All work performed in support of the building assets is documented via work order starting the day the building is turned over.
- ✓ Plan to complete a physical inventory and tagging exercise of the assets. Don't rely on asset lists provided by the contractors.
- ✓ Make sure the asset nomenclature is consistent with the rest of the campus buildings



6. Asset Management Program Development (cont'd):

- ✓ Make sure an effective PM program is developed for the new assets
- ✓ Upload the key sections of the O&M manuals and associate them with the specific assets
- ✓ Capture and select the “right” operations and manuals and “connect” them to the specific assets in the CMMS
- ✓ Upload all info into the CMMS prior to building turnover
- ✓ This process CANNOT be delegating to the building commissioning team.



7. FM Operations Team Training:

- ✓ What systems will which members of the FM team be trained on?
- ✓ Ask the contractor to create a training session syllabus for your review and approval well before the date of the session.
- ✓ Ask the contractor to provide the credentials of the trainer for your approval.
- ✓ Provide acceptable specific training windows, e.g.:
 - ❖ Tuesdays, Wednesdays, Thursdays between the hours of 9:00A & 11:30A, and 1:00P & 3:00P
- ✓ A prior notice of a minimum of two weeks is required.
- ✓ Video recording of training sessions
- ✓ Where will the training take place?
- ✓ Make attendance at these training events MANDATORY.



8. New Occupant Orientation:

- ✓ Reviewing the location of area thermostats, identify which thermostats serve which areas and show the occupants how to control them.
- ✓ Review the operation of all automatic lighting control systems.
- ✓ Review the operation of controls that will automatically operate window shades based on ambient light levels.
- ✓ Review the location of fire extinguishers.
- ✓ Review the location of and proper use of eye wash stations, emergency showers, fire alarm pull stations, etc.
- ✓ Provide an orientation of the operating procedures and characteristics of the new audio-visual equipment located in conference rooms.
- ✓ Review the location of automatic defibrillators and first aid kits.



8. New Occupant Orientation (cont'd):

- ✓ Review of the proper waste handling and disposal procedures.
- ✓ Review the locations and proper operation of unique building characteristics (e.g., lab gas isolation valves).
- ✓ Review emergency egress routes.

9. New Tools & Equipment:

- ✓ What do we need?
- ✓ Who is going to be responsible for selecting the equipment?
- ✓ Who is going to be responsible for soliciting proposals from vendors?
- ✓ Whose budget will fund the purchase?
- ✓ When will the equipment be needed?
- ✓ When does the equipment need to be ordered?
- ✓ Where will this equipment to be stored when it arrives?



10. Warranty Management/Service Contracts:

- ✓ Documentation:
 - ❖ Where is it going to be located?
 - ❖ Who is going to manage it?
- ✓ “I’m not going to touch that equipment because it is under warranty “syndrome.”
- ✓ Are any assets covered by service contracts?
- ✓ What the requirements of the service contracts?
- ✓ Who is going to inform the key members of the operations team?

11. Attic Stock Management:

- ✓ What do we want?
- ✓ Where are we going to put it?
- ✓ When is it going to be delivered?



12.Safety:

- ✓ Arc flash study and labeling
- ✓ Lockout/tagout procedures
- ✓ Eyewash stations/safety showers
- ✓ Defined confined spaces and procedures
- ✓ Safety data sheets
- ✓ Roof tie-offs

13.Waste Stream Management:

- ✓ Recycling
- ✓ Landfill
- ✓ Composting
- ✓ Hazardous materials
- ✓ Biohazards



13. Waste Stream Management (cont'd):

- ✓ Batteries
- ✓ Electronics
- ✓ Location of dumpsters
- ✓ Selected routes through the building to get the dumpsters

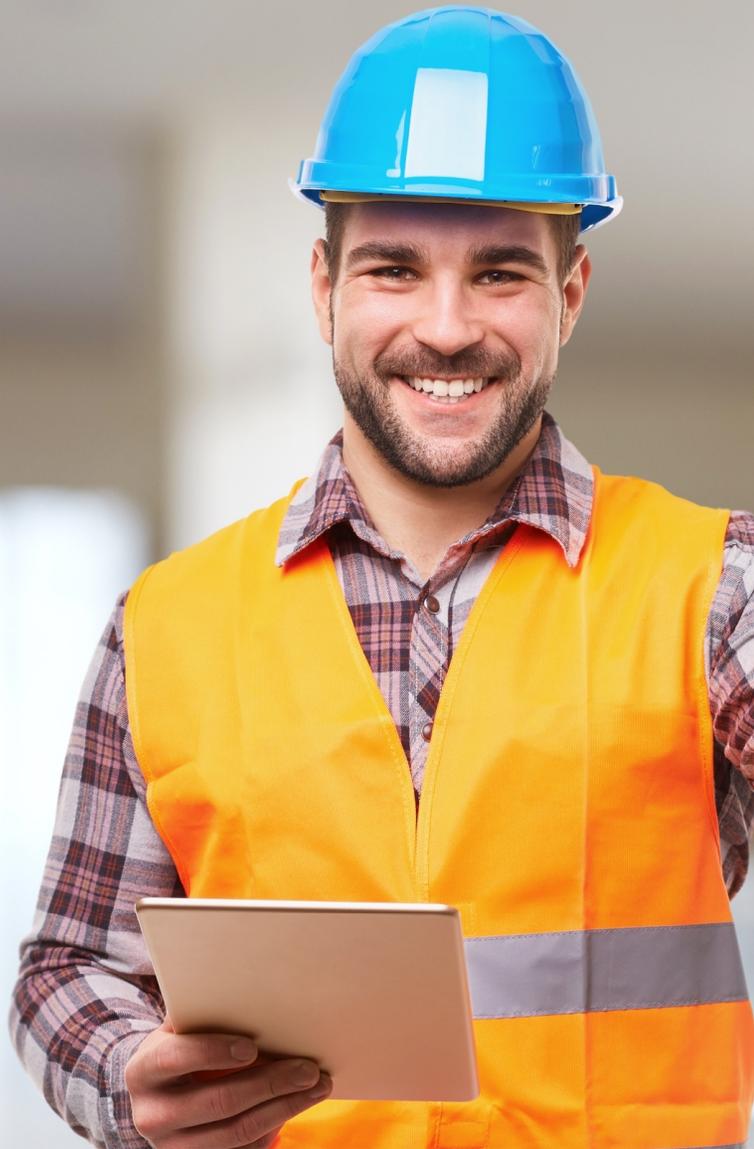
14. Other Topics:

- ✓ Access control
- ✓ Building automation system
- ✓ Fire protection
- ✓ IT
- ✓ Final landscaping activities
- ✓ A/V equipment
- ✓ Appropriate “equipment” located in “equipment” rooms by the new occupants





FINAL COMMENTS



The “frontline” staff and the customers reap the benefits. People really want it to work! They want a building that is ready “turn on”!

“Successful project delivery teams start the capital project delivery process with the end in mind. They not only focus on integrating operations into the design process, but also ensure that the facility is prepared for its intended use.”

Patrick Duke
Health Facilities Management Magazine
August 2015

1. Begin the project with the “end in mind:”

- ✓ A building that is fully operational with the support of the entire operating staff who are fully prepared to take the keys for a 50-year building life.

2. The turnover process belongs to the operations team!

- ✓ Don't delegate it to the project team.
- ✓ The project team SUPPORTS the turnover process.

3. Don't manage the turnover process simply by adding “words” to the design documents.

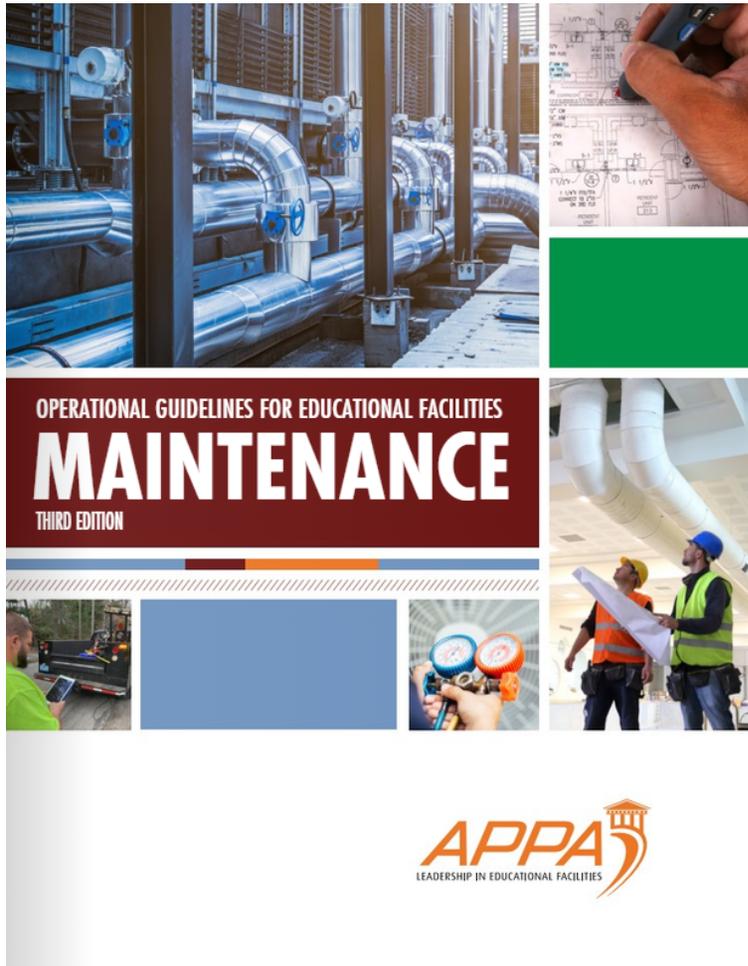
- ✓ The “words” are there to educate the design/construction team to know what to expect as the process is led by the operations team.
- ✓ Don't delegate it to the project team.

- 4. Start planning for building turnover early in the design phase.**
- 5. Get buy-in from FM leadership!**
- 6. “Commissioning” the building is only a component of a holistic turnover process.**
 - ✓ “Commissioning” and “Building Turnover” are not synonymous.
- 7. Counter the argument that “we don’t have time dedicate resources to this effort!”**

“All these tasks will be performed along the way, in the absence of “TOW,” albeit in an uncoordinated, haphazard, reactive and stressful fashion.”



SOURCE MATERIAL



CHAPTER 15

Turnover Work Group Practices

By Doug Litwiller

Most organizations struggle with the turnover process that occurs when a newly constructed building is turned over to the operations team. Educational facilities are no exception. The turnover activities needed to transition newly constructed or renovated space from “construction” to “operations” are often overshadowed by the flurry of construction work required to reach project completion and occupancy based on strict project schedules.

Frequently, the turnover process may not *officially* start until the project gets closer to the substantial completion date. If the turnover process is poorly planned and executed, the members of the operations team receive a building for which they are not ready. The goal of every project team should be to start planning the turnover well in advance of the date of substantial completion using a process called the TurnOver Workgroup process or TOW. At its core, TOW is more of a mindset than an actual process. TOW helps change the focus of new building from a construction project that has a finite, relatively short-term, beginning and end; to a focus on the operational aspects of the building, which will last for 50+ years.

The TOW process is aligned with *ANSI/APPA 1000-1 Total Cost of Ownership for Facilities Asset Management (TCO) – Part 1: Key Principles*. The TCO standards were developed to help building owners and managers to “produce the greatest possible ROI for a given building, facility, general site, or infrastructure need throughout its lifespan (initial design and planning stage to the end of an asset’s life).” Furthermore, the standards state that the “optimum time for the application of TCO occurs during the planning and design phase of procuring or building an asset,” which is one of the key tenets of the TOW process.

Turnover activities are part of every project. Some are planned, some happen organically, and many are reactionary. The purpose of the TOW process is to provide

Q

&

A