

# Quality Management: It all starts with a Plan

Opal Group SpArc 2022  
The Statler, Dallas, Texas

Presenters:

- Gregory Buchanan, AIA, CSI, NCARB, LEED AP BD+C
- Michael F Czap, AIA

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## Excellence

Dictionary

Enter a word

**excellence**  
[eks(ə)lens] ↔

**NOUN**  
*excellence (noun) - excellences (plural noun)*  
the quality of being outstanding or extremely good.  
"a center of academic excellence"; "the award for excellence in engineering"  
*synonyms:* distinction quality high quality superiority brilliance greatness merit caliber eminence  
preeminence supremacy peerlessness transcendence value worth skill talent genius  
virtuosity accomplishment expertise mastery prowess ability supereminence  
*antonyms:* inferiority mediocrity

- *archaic:* an outstanding feature or quality.

**ORIGIN**  
late Middle English: from Latin *excellentia*, from the verb *excellere* 'surpass' (see *excel*).

Translate excellence to

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## Quality perceptions

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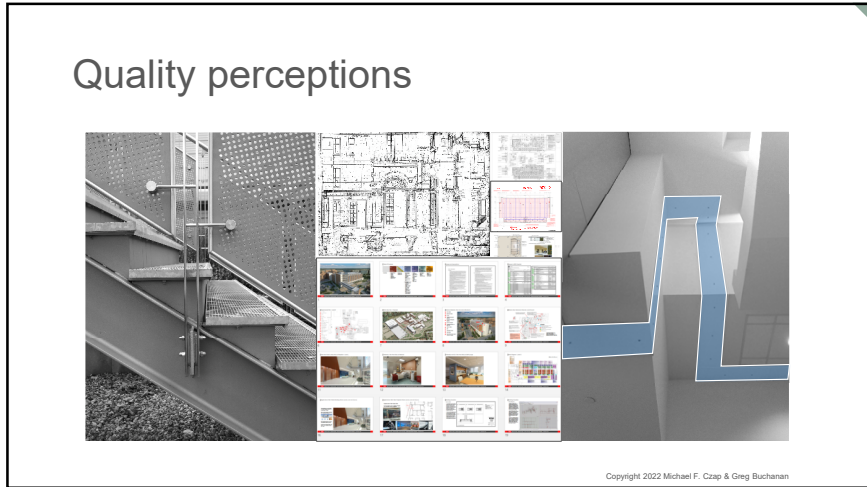
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## What does Quality mean to you?

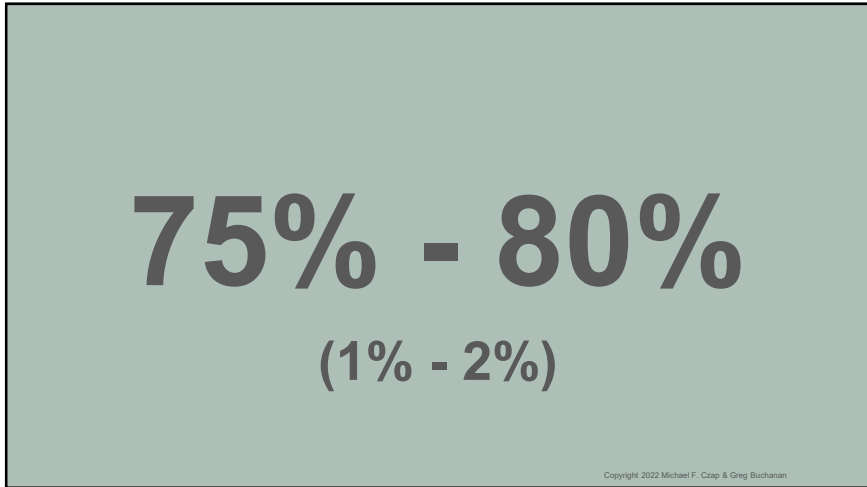
... to the Client  
... the Contractor  
... a Court

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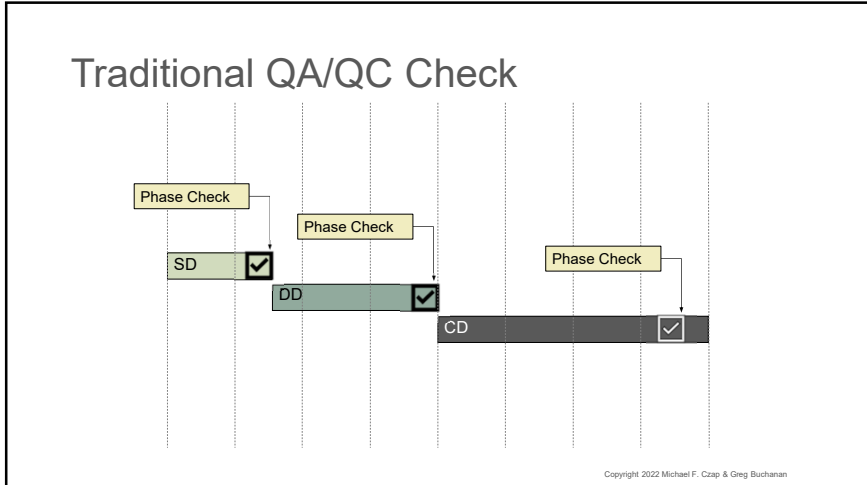
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### Forces affecting Project Delivery Excellence

- Changing technology
- Globalization
- Overlapping / conflicting regulation
- Proprietary building systems
- Project complexity
- Litigation

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### Traditional QA/QC - Disadvantages

- Little meaningful engagement
- The work is often considered 'complete' when checked
- The opportunity to 'change course' is limited, as the phase is already complete.

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### Why do we fall short of the finish?

- Staffing is **inconsistent**
  - Short staffing
  - Staff not the right fit and/or duration
- Design or Technical decisions are debated and studied ad nauseum = **late decisions**
- The project is worked to the deadline in lieu of worked to completion
- The work is planned to the fee vs. the **effort** required
- Experienced staff not engaged early or often enough

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### BETTER DELIVERY PROCESS | Lean Architecture

Flow | Similar Processes | Reduce or Eliminate Constraints

*How many issues must be resolved?*

Longer design phase, shorter documenting phase  
 Simultaneous development  
 Advance design that can be built & afforded

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Phase	SD	DD	IFP	IFC
Focus	Define: Overall Scope Systems & Codes	Systems integration Validate SOW Finalize Codes	Code Compliant Solution	Coordinated Documents Sufficiency
Audience	Owner Contractor	Owner Contractor	AHJ	Contractor

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### Improvement Strategies

#### 01

Experienced staff inclusion vs. exclusion

#### 02

Cost/benefit of doing it right now or fixing it later

#### 03

Proactive vs. reactive  
Prevent problems from occurring

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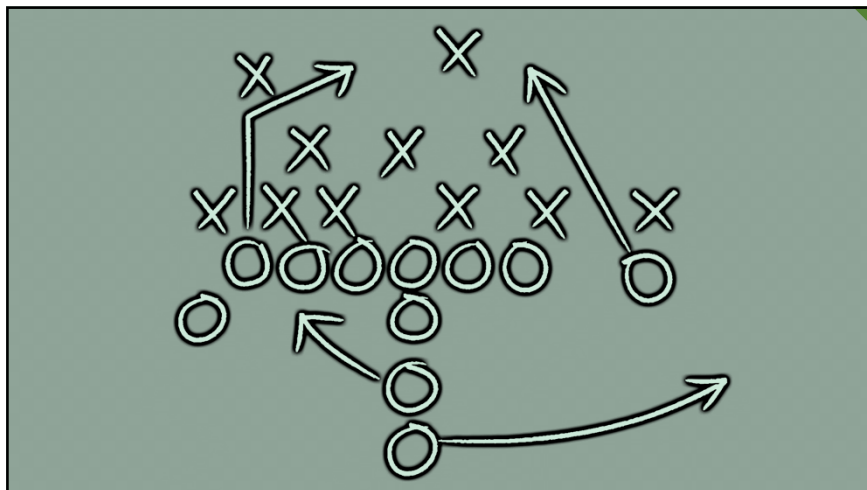
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## Project Excellence Planning

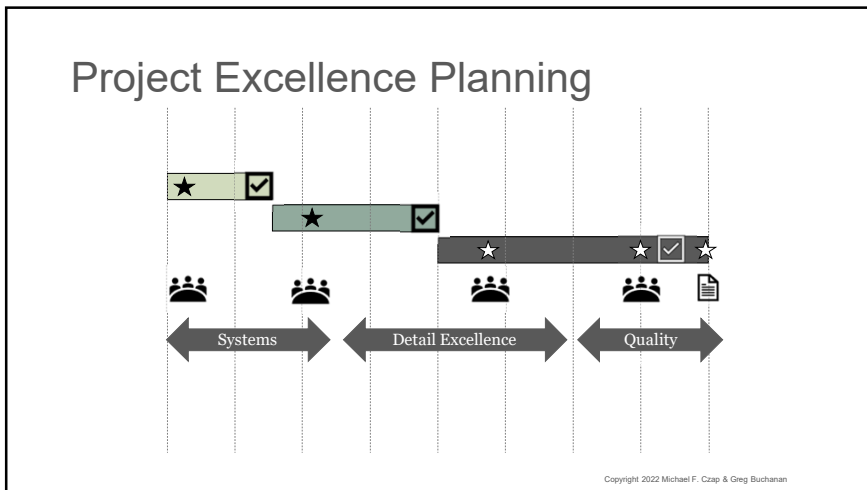
rethink and improve quality process

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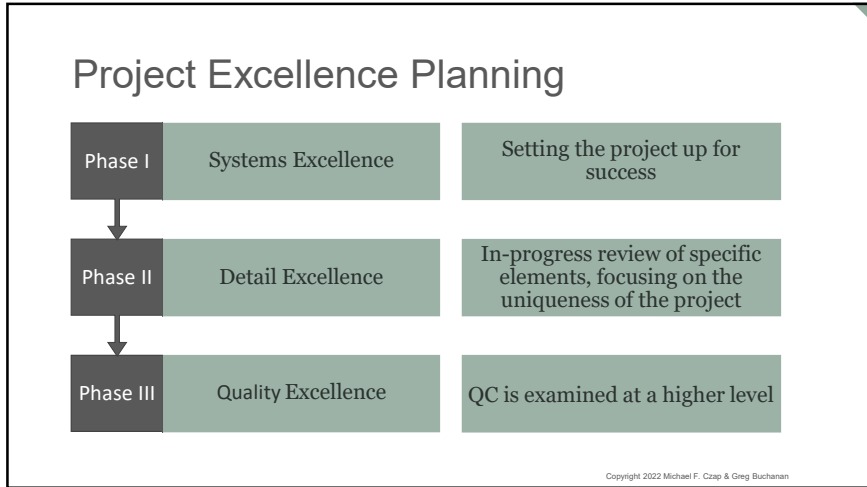
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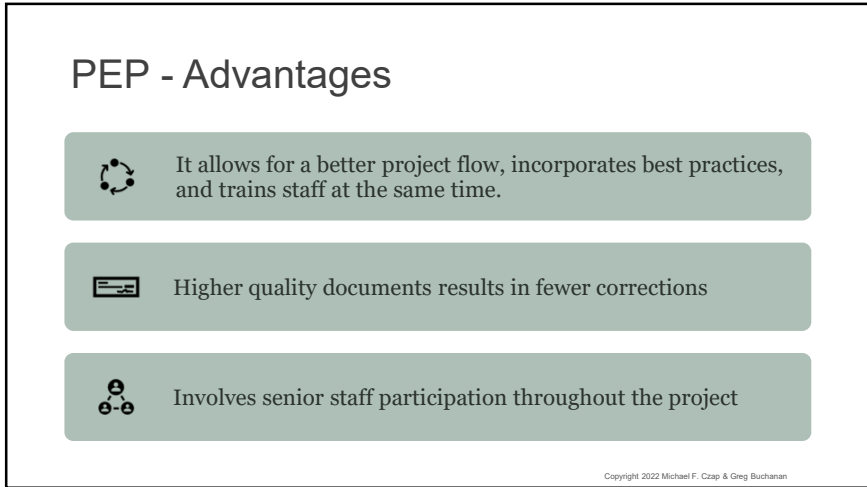
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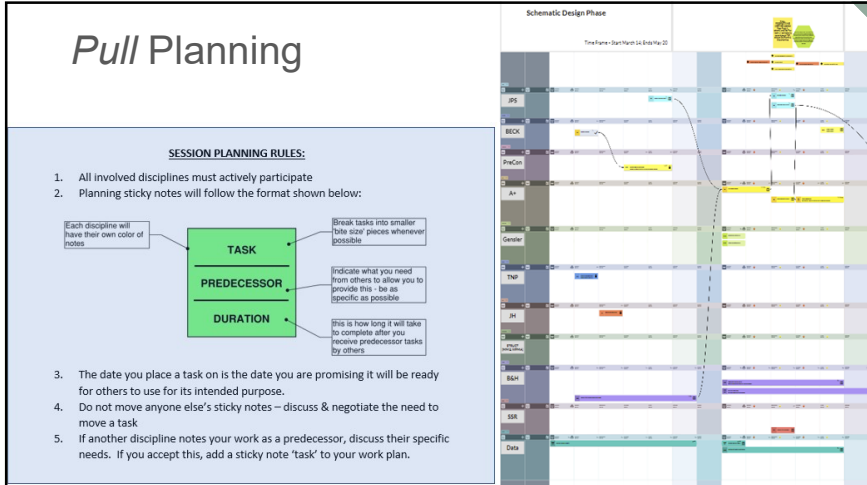
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- ### Things that work
- QA reviews **earlier**
  - Experienced staff input
    - Invest in experience / OJT
  - **Empower** the project team
    - Accountability
  - **Lessen** dependency on redlines
  - Weekly team meetings
  - Focused coordination
  - Accelerate Decision Making
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### BUILDING SYSTEMS REVIEW

Goal

Project Name: \_\_\_\_\_  
Project Number: \_\_\_\_\_

**AGENDA**

**Tuesday, October 4**

**INTRODUCTION: 8:30 - 8:45 am**

1) Review agenda  
2) Review project goals  
3) Review project schedule  
4) Review project budget  
5) Review project risks  
6) Review project communication  
7) Review project roles and responsibilities  
8) Review project deliverables  
9) Review project milestones  
10) Review project risks  
11) Review project communication  
12) Review project roles and responsibilities  
13) Review project deliverables  
14) Review project milestones

### PROJECT ROADMAP DESIGN DEVELOPMENT

**GENERAL**

- Review functional requirements
- Review all building systems (mechanical, electrical, plumbing, fire, etc.)
- Review all design team members
- Review project schedule
- Review all project milestones
- Review all project risks
- Review all project communication
- Review all project roles and responsibilities
- Review all project deliverables
- Review all project milestones
- Review all project risks
- Review all project communication
- Review all project roles and responsibilities
- Review all project deliverables
- Review all project milestones

**COORDINATION**

- Meet with all building systems (mechanical, electrical, plumbing, fire, etc.)
- Meet with all design team members
- Meet with all project milestones
- Meet with all project risks
- Meet with all project communication
- Meet with all project roles and responsibilities
- Meet with all project deliverables
- Meet with all project milestones
- Meet with all project risks
- Meet with all project communication
- Meet with all project roles and responsibilities
- Meet with all project deliverables
- Meet with all project milestones

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## Restaurant Metrics

*Dinner rush*

Empty tables need clearing

- Not enough busboys!

Wait staff / cooks are idle

### Options?

- ❖ Cost for Wait staff / Cooks to clear tables?



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# Can quality be measured?

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## Types of quality feedback

**Sheet A3.01**

- Identify on the drawing the RFI classification for the suspended ceiling and identify a detail drawing for the ceiling to be attached to the building structure. Reference: BCI Section 503.9, and 502.1.

**Sheet A3.02**

- Provide on the plan the RFI classification for the suspended ceiling. Reference: BCI Section 503.9, and 502.1.

**Sheet A3.03**

- Identify on the drawing the location and section marks for building or Reference: BCI Section 100.1.1.
- Identify on the drawing the location of roof slope and the high and low. Reference: BCI Section 100.1.1.
- The roof slope of the roof shall be 1/4" per foot. It shall be provided in a detail and shall be used for construction of the ground. Reference: BCI Section 100.1.1.
- Roof drainage shall be provided to the roof drains and shall be provided in a detail and shall be used for construction of the ground. Reference: BCI Section 100.1.1.

Subject	Discipline	Source
AS 4.2 Detail 40: Bent Plate	Architectural	Specification

**Question**

Detail 40 on AS 4.2 shows a "Bent Metal Plate" to be installed from the diffuser to the wall. Can you please provide specifications for material, manufacturer, size, gauge, and type of finish for this item?


Location / Building
Office Building

**Office Building**

*Construction Documents - Clarifications and Assumptions*

**07 Thermal & Moisture Protection**

- A building weathertightness is not included.
- A mechanically fastened TPO membrane roofing system with an R-30 is included in lieu of fully adhered TPO membrane roofing system. Please review.
- Detail 28 on AS 3.1 calls for "RFD" down on top of metal deck and detail doesn't reflect this condition. Please review.
- Roof drainage and flow (RFD) of roof walkway grates are included.
- "Welding" "upper railing" and "cover board" integral to the building main roof and the main deck is included. Please review.
- Details under 16 and 24 on AS 1.7 provide path of insulation between panels and detail roofing/walking conditions. Also three rooms to be a roof 1 between inter-rows of upper exterior and entry main. Please review.
- Detail 28 on AS 3.1 provides possible insulation (insulation) between panels and flashing into the between openings. Please review.
- Transition between 37 detail flashing and 35 detail flashing on AS 3.3 with one being 2" and the other being 2.5". Please review.



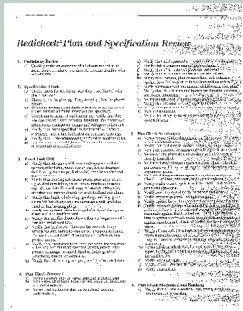
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### Other quality comparisons

“But my other architect does it this way...”

“Why does Johnny in the other studio mark up different things than Susie does in my studio?”



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### {Your Firm Name Here} 2021 Record

**42 - 15 - 28**

WIN      LOSE      TIE  
 PROFIT      LOSS      BREAKEVEN



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### Quality metrics

Rank, Track, and Score

**Objective:**

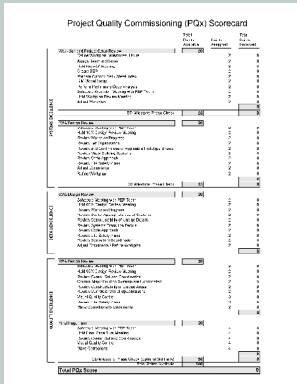
- Budget and Schedule success
- Permitting comments & issues
- RFI's / ASI's / Change Orders

**Subjective:**

- Client satisfaction surveys
- Repeat work

Project Quality Commissioning (PQx)  
 Objectify the quality processes outcomes

- Profit & Net Multiplier impact



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### Make decisions earlier

### Involve Senior staff

### Focus:

## Systems, Details & Quality

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**Thank-you!**

This concludes the AIA accredited portion of the presentation.

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Excellence in Project Delivery  
begins with the first play...

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<p><a href="http://www.leanarchitecture.com">www.leanarchitecture.com</a></p>			

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