

# Precast Project Management

Matt McNicholas  
Estimating / Engineering Manager  
S&M Precast – Henryville, IN



1



# Why am I Here?



2

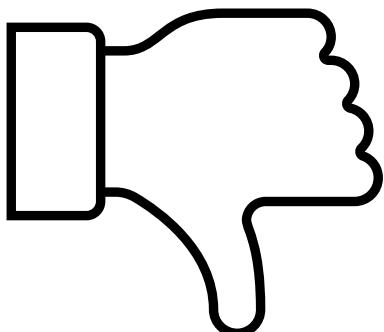


# Why are You Here?



3

## Why PM is Hard to Learn in Precast



- Most learning is **production-focused**
- Every decision affects **downstream**
- PM education is often **accidental**



4

## The Education Gap



LIMITED FORMAL PM  
TRAINING IN PRECAST



INFORMATION OFTEN  
SILEOED



MISTAKES TEACH  
LESSONS SLOWLY AND  
PAINFULLY



5

# End of Section 1



6

## Where I Started

- Thought I would end up in **business / investing**
- Started working as a **project manager**
- Part of next generation **family-owned business**



7

## Where I Am Now

Manager of  
Estimating &  
Engineering

Upstream  
decisions impact  
downstream  
execution



8

## What That Lets Me See



Engineering coordination with **production, dispatch, billing**, etc.

**Risk points** before they reach PM

Decisions from a **Birdseye view**



9

## How This Applies to You



Perspective helps **identify patterns** and **prevents mistakes**



Project Management -> **Heart of Process**



10

# End of Section 2

THE  
PRECAST  
SHOW

11



12

## Scenario & Rules

- 1. **Teams of 2-3**
- 2. **Plan Thanksgiving dinner: tasks, order, dependencies**
- 3. **Simple schedule / Gantt**
- 4. **Time Limit – 10-15 Minutes, + Debrief**



13



14

## Debrief

What was the first thing you decided?

What created bottlenecks?

What happens if one task is late?

Did anyone assume unlimited resources



15

## Mapping to Precast

Pans and Mixing Bowls = Forms

Oven = Capacity

Prep = Engineering / Submittals

Serving = Delivery

Guests = Customers



16

# End of Section 3



17

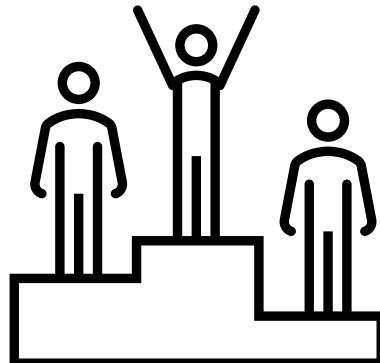
## Lifecycle Overview



18

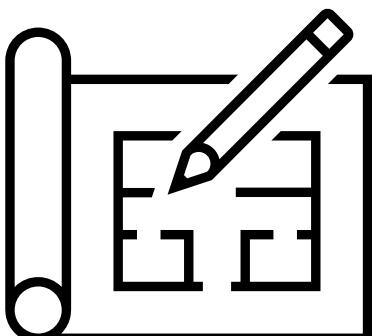
## Lifecycle Overview - Award

- **Understand** project timeline and **expectations**
  - When is **product first needed** on site?
  - Do they have proper **lifting / handling** equipment?
  - Common **understanding** of specifications / design
  - Can the plant **satisfy** project **expectations**?



19

## Lifecycle Overview – Design



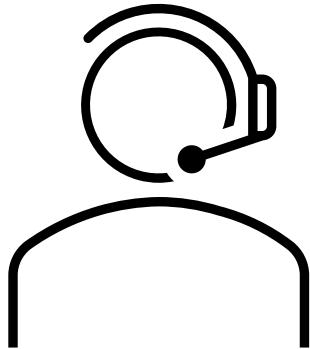
- Preparing submittals
  - Typically **within a week**
  - Can **Overflow** or **stock/standard** be used?
  - Understand **specs**
- **Know your customer**
  - **Review** drawings?
  - **Release** during submittals?



20

## Lifecycle Overview - Approval

- Confirm project expectations
- Communication is key
  - Customer
  - Plant
  - Scheduling
  - Dispatch
  - Billing
  - Yard



THE  
PRECAST  
SHOW

21

## Lifecycle Overview – Procurement



- Ensure downstream has tools and information they need to be successful
  - Special Boots?
  - Special Joint Sealant?
  - Materials for the plant
  - Hatches
  - Hole formers

THE  
PRECAST  
SHOW

22

## Lifecycle Overview – Delivery / Post Delivery



THE  
PRECAST  
SHOW

23

# End of Section 4

THE  
PRECAST  
SHOW

24

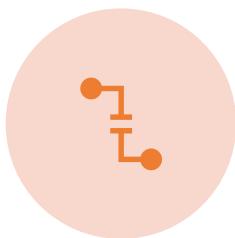
## Where Projects Break



THE  
PRECAST  
SHOW

25

## Pitfalls per Area - Award



DISCONNECT BETWEEN  
CUSTOMER AND PM



NOT UNDERSTANDING  
TIMING

THE  
PRECAST  
SHOW

26

## Pitfalls per Area - Design

- **“It works on the computer”**
- Rejected approvals
- **Too much back and forth**
  - Emotional Bank Account



27

## Pitfalls per Area - Procurement



- **Wrong Material**
  - Size
  - Features
  - Unapproved Vendor
- **Understand quotes from estimating phase**
- **Uphold suppliers to high quality standard**



28

## Pitfalls per Area – Delivery / Post Delivery

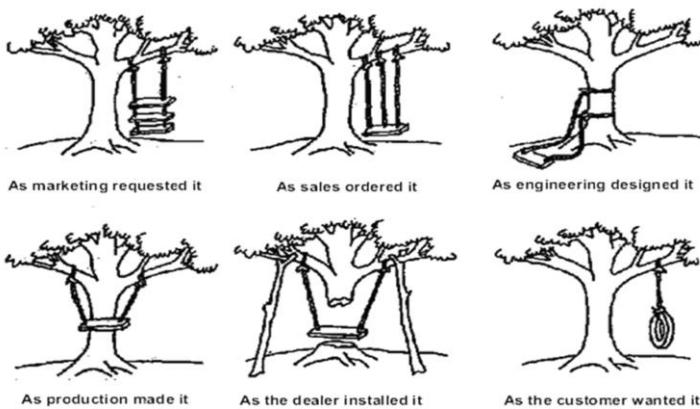
- Can they get it off the truck?
  - **Truck coming back with product = NOT GOOD**
- **Visual rejection**
  - **YYPEX**
  - Exposed Epoxy Rebar
  - **Extended Bases**
- **Missing structures**



THE  
PRECAST  
SHOW

29

## Lessons Learned



THE  
PRECAST  
SHOW

30

# End of Section 5



31

# Investing In Yourself



32

**Investing is not  
just a 401(k)...**

**What is investing?**



33

**Why should I invest in  
my career?**

**How do I invest in my  
career?**



34

## Utilizing Resources



- NPCA Resources
  - Webinars
  - Master Precaster
  - Leadership NPCA
  - Committees
  - Papers
  - Peer groups (Young Professionals)
  - Classes
- Continuous Education
  - GED / High School education
  - Undergraduate or Bachelors Degree
  - MBA
  - Stand Alone Classes
- Accreditations / Certifications
  - PE (Professional Engineer)
  - Lean Six Sigma Green/Black Belt
  - Osha Certification
  - CPA (Accounting)
  - CFA/CFP (Finance)
- The Internet
  - YouTube – watching professionals or people who cover familiar certain topics
  - Podcast
  - Low cost, and easily accessible
  - Online forums



35

## Leaders and what we can learn from them



36

Forbes 2025 Billionaires List - The

https://www.forbes.com/billionaires/

Forbes

The Richest People In The World

Search this list

Rank Name Net Worth Age Country/Territory Source Industry

Rank	Name	Net Worth	Age	Country/Territory	Source	Industry
1	Elon Musk	\$342 B	53	United States	Tesla, SpaceX	Automotive
2	Mark Zuckerberg	\$216 B	40	United States	Facebook	Technology
3	Jeff Bezos	\$215 B	61	United States	Amazon	Technology
4	Larry Ellison	\$192 B	80	United States	Oracle	Technology
5	Bernard Arnault & family	\$178 B	76	France	LVMH	Fashion & Retail
6	Warren Buffett	\$154 B	94	United States	Berkshire Hathaway	Finance & Investments
7	Larry Page	\$144 B	52	United States	Google	Technology
8	Sergey Brin	\$138 B	51	United States	Google	Technology
9	Amancio Ortega	\$124 B	89	Spain	Zara	Fashion & Retail
10	Steve Ballmer	\$118 B	69	United States	Microsoft	Technology

Elon Musk cofounded seven companies, including electric car maker Tesla, rocket producer SpaceX and artificial intelligence startup xAI.

View Profile Read Premium Article

Billionaires Wealth History

54°F Cloudy

Search

8:31 PM 1/13/2026

37

## Audience Reflection Prompt

- What is a **long-term goal** you have for yourself or your career?
- What could you do to **start working towards** that **goal**?
- What **goals** do your **co-workers** and **family** have?
- How can you **help** your **co-worker** or **family** achieve their **goal**?

38

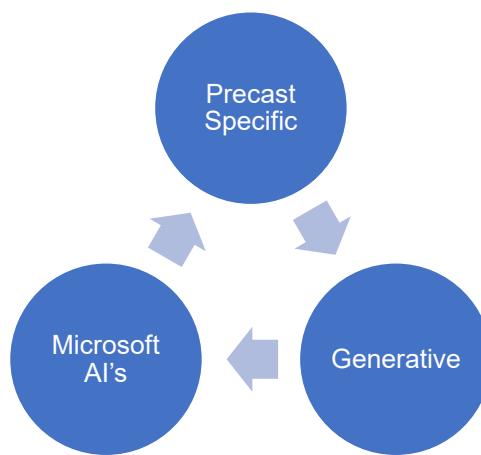
# End of Section 6



39

## Tools & Technology for PMs

- Free or Paid
- Early stages
- TRUST BUT VERIFY
- Own it or it will own you



40

## Precast-Specific Tools

Many NPCA members offer products under:

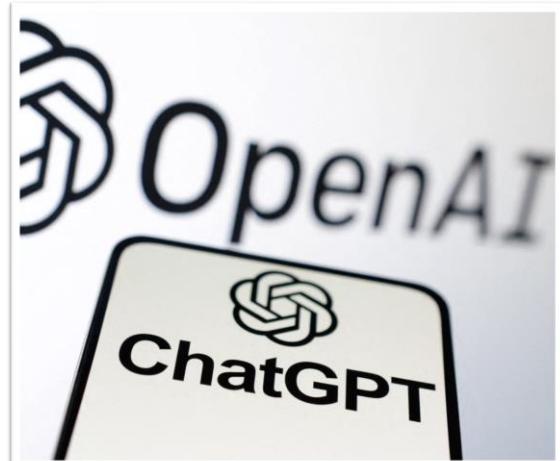
- Computer Software
- Quality Control Software
- Inventory Control Systems
- Most are here on the exhibit floor!



42

## Generative AIs

- Generate emails or responses
- Editing PDFs
- Brainstorming
- More effective communication
- Gut check from 'someone' you don't have a day-to-day relationship with



43

## Excel + AI Example

0. Engineering to Production Tracking...  
Spreadsheet

estimating

can you give me a weekly recap for this feedback from our engineering to production team?

est.

Yes — based on the current entries in the Engineering → Production tracking, here's a clean weekly recap you can share internally.

Weekly Engineering → Production Feedback Recap

Total Entries This Week: 4  
Engineers Involved: MM, LM, CW  
Jobs Impacted: 4  
Total Estimated Cost Impact: ~\$4,250

**Key Themes & Issues Identified**

1. Design Specification Adjustments
  - Wall thickness revisions (6" → 8")
  - Pipe class upgrades (Class 3 → Class 4)
  - These changes directly affected material quantities and cost.
2. Early Design Assumptions Needing Correction
  - Initial assumptions during estimating did not fully align with production or project requirements.
  - Most issues were discovered before fabrication, preventing larger downstream impacts.
3. Cost Implications
  - Individual job impacts ranged from \$500–\$2,000
  - Larger changes were tied to structural revisions, rather than minor detailing.

+ Ask anything

Weekly Engineering → Production Email Update  
(Clear, professional, easy for leadership & production to skim)

Email

Subject: Weekly Engineering → Production Feedback Recap

Team,

Here is this week's Engineering → Production feedback recap:

**Summary**

- Total items logged: 4
- Jobs impacted: 4
- Engineers involved: MM, LM, CW
- Estimated total cost impact: ~\$4,250

**Key Themes**

- Design specification changes
  - Wall thickness revisions (6" → 8")
  - Pipe class upgrades (Class 3 → Class 4)
- Early design assumptions
  - Several items stemmed from assumptions made during estimating that required later correction.
  - All issues were identified prior to fabrication, avoiding production rework.

**Cost Impact**

- Individual job impacts ranged from \$500 to \$2,000
- Higher costs were tied to structural or spec-related changes rather than detailing errors.

+ Ask anything

44

# Wrap Up

45

## Key Takeaways and Actionable Items

1. Project Managers need to strive for perfection
2. Understand your role from a bird's eye view
3. Always look to make yourself and those around you better



46

# Closing, Thank You



47

## Sources

- [New Tech - Titan Precast Management System](#)
- [Idencia OneSource - Product Data Tracking for the Precast Concrete and Construction Manufacturing Industries](#)
- [AICrete](#)
- [Careers/Jobs – Afinitas](#)
- [8 most common reasons for a conflict between a client and a software house | AGILEAN Solutions](#)
- [Forbes 2025 Billionaires List - The Richest People In The World Ranked](#)
- [ChatGPT-owner OpenAI fixes 'significant issue' exposing user chat titles | Reuters](#)

