PREVENTING THE PARADE OF DELAYS IN TAKT PRODUCTION

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PARADES OF TRADE AND TAKT
PARADE OF DELAYS
Avoding and handling delays in Takt
• Robust plans
• Adjustments after the fact
• Last Planner System
How can managers on site prevent delays proactively in executing the takt?
**METHODOLOGY**

- Case study of Norwegian contractor Consto
- Semi-structured interviews with seven informants
- Informants had varied experience using Takt
  - One hospital
  - One Airport
  - Several Schools and apartment buildings
- All projects examples were design build
RESULTS – CAUSES FOR DELAYS

Deliveries and logistics
- Orders made too late
- Too early deliveries
- Combined takt and transport areas

Errors
- Rework

Incorrect estimation
- Underestimated amount of work
- Overestimated efficiency

Available staffing and crews
- Lack of workers
- Temporary labor inefficiency
- Illness and injuries

Communication and key roles
- Key personnel replaced between planning and execution
- Wrong people involved in planning
PARADE OF DELAY IN TAKT PRODUCTION

**Scenario 1**  
Delayed start

**Scenario 2**  
Overlapping work – Inefficient production

**Scenario 3**  
Unfinished work left for later

Legend:
- Trade 1
- Trade 2
- Trade 3
- Trade 4
- Trade 5
- The trade’s use of time in a zone
- Time buffer
- Delay
- Planned production
- Actual production
RESULTS – PREVENTING DELAYS

Proactive mechanisms in production
• Weekly Meetings
  • Could not handle all challenges
  • Trades too positive
• Daily Huddle
  • Eliminated need for weekly meetings
  • Led by site superintendent
  • Protected hour after the daily huddle

Planning phase
• Deliveries and logistics planning
• 16-12-8-4-1 meeting series
The main goal is to ensure that the design's detail level is sufficient and that the preconditions for construction are adequate.
16-12-8-4-1 MEETING SERIES AND TAKT PLANNING

The 16-12-8-4-1 meeting series timeline
The takt planning timeline

1. Establish takt areas
2. Find the sequence of trades
3. Takt trains are established
4. Estimate work amount
5. Length of trains are set
6. Takt areas are controlled and adjusted
7. The construction strategy is formed
8. The takt plan is established

Draft of drawings and models for review

Takt production starts on site
CONCLUSIONS

• The takt planning process is key to smooth takt production
  • Important to create ownership and commitment

• Good handover from design to production is essential
  • The 16-12-8-4-1 meeting series is an effective tool for quality assuring the
design and making the trades familiar with it

• Parades of delays can have significant consequences
  • Delays should be prevented – Not reacted on

• Frequent trade involvement is required to prevent delays

• Daily Huddles and Weekly Meetings are good tools
  • Beneficial to involve people who have an overview perspective of the
project and decision-making mandate
THANK YOU!

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