IMPROVING COMMISSIONING AND QUALIFICATION DELIVERY USING LAST PLANNER® SYSTEM

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Background & Context

- **Stage 1**: Feasibility
- **Stage 2**: Conceptual Development
- **Stage 3**: Project Delivery Planning
- **Stage 4**: Design
- **Stage 5**: Construction
- **Stage 6**: C&Q

**Project Phases**

- **Project Stage 1**: Feasibility (Evaluation of business opportunities)
- **Project Stage 2**: Concept Development (Development of best options)
- **Project Stage 3**: Project Delivery Planning (Finalise technology and project objectives)
- **Project Stage 4**: Detailed Design
- **Project Stage 5**: Construction
- **Project Stage 6**: C&Q
A clear refrain in the literature is that commissioning (i) needs deliberate project management, but (ii) is too often not given the attention it deserves. One of the issues with commissioning, which contributes to problem (ii), is that the value thereof is hard to quantify.

Ballard and Tommelein (2016)

Lawry and Pons (2013, pp.2)
Research Design

Qualitative in Nature
Mixed-Methods Approach
Single Case Study
Principles of Action Research & Learning
Triangulation
Sequential Explanatory Approach

Limitations:
• single case example
• the small sample size
• the limited sample profile

Triangulation of Research Sources
Findings: Issues & Challenges

Summary of review of construction handoff to C&Q

Too much late, ad hoc, reactionary planning

A need for C&Q to join the dots with construction (and other units).

A need to have and honour the “next customer mindset”.

A requirement to have “value” discussions, engagement, and transactions.

Teams should work from a shared “meta” board and plan.

Challenges to LPS implementation in C&Q

- LPS Knowledge & Awareness
- LPS Facilitation & Behaviours
- Absence of Standard Work
- Unwillingness to Participate
- Firefighting to Complete Handoffs
- Management Support
Findings: Benefits

Overall RNC Week 02

- Client Driven Delays: 84
- Other Tasks Prioritised: 21
- Schedule / Coordination: 18
- Equipment: 10
- Pre Req Work - Self: 9
- Incorrect Time Estimate: 9
- 3rd Party Support: 8

Client Delay RNC Week 02

- Approval cycle time exceeded: 29
- Review cycle time exceeded: 21
- Not yet reviewed: 12
- Not yet approved: 11
- Returned with Client resource extra scope added: 6
- Unavailable: 5
Discussion

Overall Schedule

LPS Implementation

Team Alignment

Client & Management Support

Stakeholder Alignment

Iterative Learning & Action Cycle
Conclusion & Recommendations

**Advantage:** Greater collaboration; increased visibility of workflow; and productivity, schedule alignment, safety, cost, and client value-add benefits.

**Client:** Utilise best-practice, building on existing LC research. Sponsor team-wide and supply chain alignment to foster a ‘project-first’ mindset.

**Management:** On-going education in philosophy & concepts of Lean & LC.

**Sector:** Government & Private sector should adopt sector-wide Lean thinking on capital project delivery.

**LPS:** Extend across the entire project as a single end-to-end implementation.

**Future research:**

- Examine a single LPS project implementation as opposed to phase by phase implementations.
- Evaluate the benefit of creation of Standard Work in the C&Q process.
- Consider incorporation of Takt and Scrum principles and concepts to support LPS implementation in C&Q.
THANK YOU