Theory of Constraints Practitioners Alliance www.tocpractice.com

Sanjeev Gupta

Focus & Finish: The Operating Motto for a Project Factory

28 November, Tuesday, 18:00 UK time

About the presenter

- Recognized by TOCICO with Lifetime Achievement Award in 2016.
- Founder & CEO of Realization (www.realization.com), a provider of real-time scheduling software for projects based on CCPM concepts. Realization's 350+ customers have added a total of more than $6B to their bottom line by using its software.
- Before Realization, founded and led Thru-Put Technologies, a provider of real-time scheduling software for manufacturing.
- Started career at Xerox in its manufacturing operations after an MS in Management and Public Policy from Carnegie Mellon University, an MS in Mechanical Engineering from Virginia Tech and a BS in Mechanical Engineering from IIT-Delhi.

About this webinar

- Why have an operating motto; examples of operating mottos
- Why Focus & Finish as an operating motto for projects
- How to enhance CCPM and Agile for more Focus & Finish
- (Time Permitting) Project Planning Tutorial

Empowering People

We all know why empowerment is important.

- People don't just perform the tasks assigned to them. They also contribute with their judgment and creativity

However, empowering people can also hurt performance

- It isn't just that "the sum of local optima does not equal global optimum". It's that "local optimization almost always hurts global optimum"

Quiz

What's the best way to get align local with global:

A. Give people detailed instructions

B. Centrally approve all exceptions and ideas

C. Train everyone in Systems Thinking, TOC etc.

D. Just point them in the right direction

COPA Airlines Example

(Presented by Stephen Covey at Realization's Project Flow conference)

Why "Single Piece Flow" is so powerful in manufacturing

"Setup is the dirtiest word in manufacturing."

- Bob Vollum, Jonah's Jonah

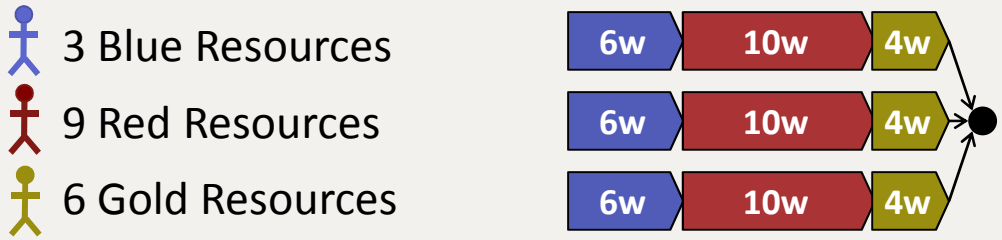
- No matter how well prove that a setup saved at a non-constraint is a mirage, doing long setups for short runs will not fly.
- The only antidote is setup reduction. When you reduce setups, even on non-constraints, it helps everyone.

"Setups are the biggest source of variability in manufacturing."

- Eli Goldratt, Inventor of TOC

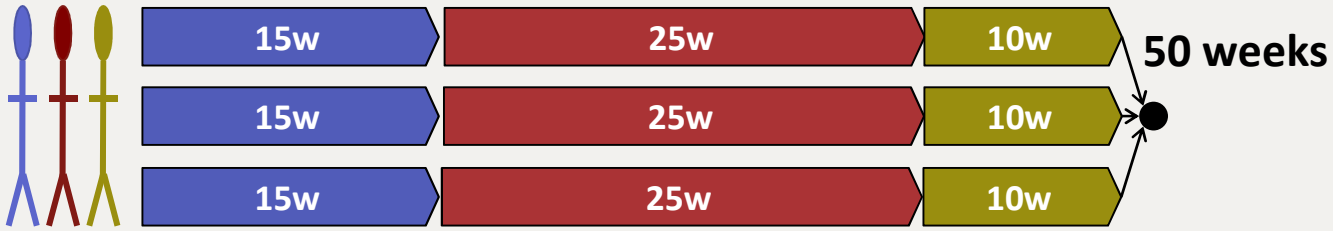
LOCAL VS. GLOBAL IN PROJECTS

ILLUSTRATION

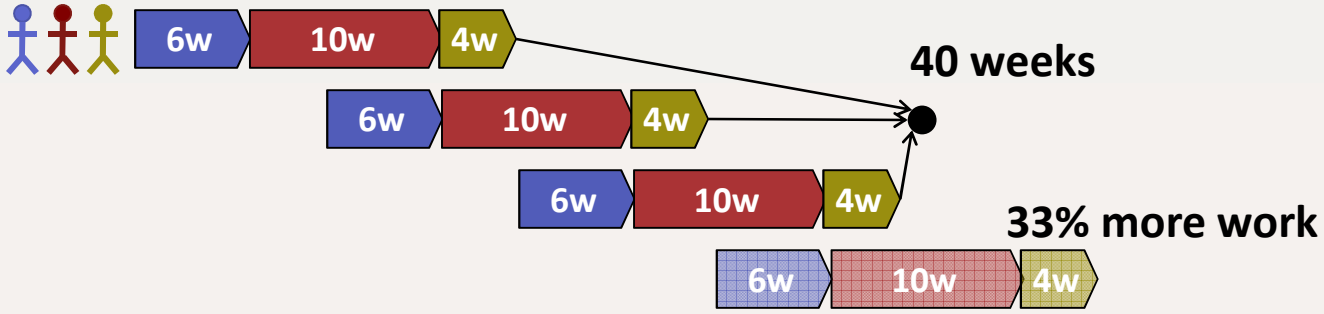


Durations include interruptions

MODE A: SPREAD RESOURCES THIN TO ACHIEVE HIGH UTILIZATION



MODE B: FOCUS AND FINISH TO ACHIEVE FAST CYCLE TIMES



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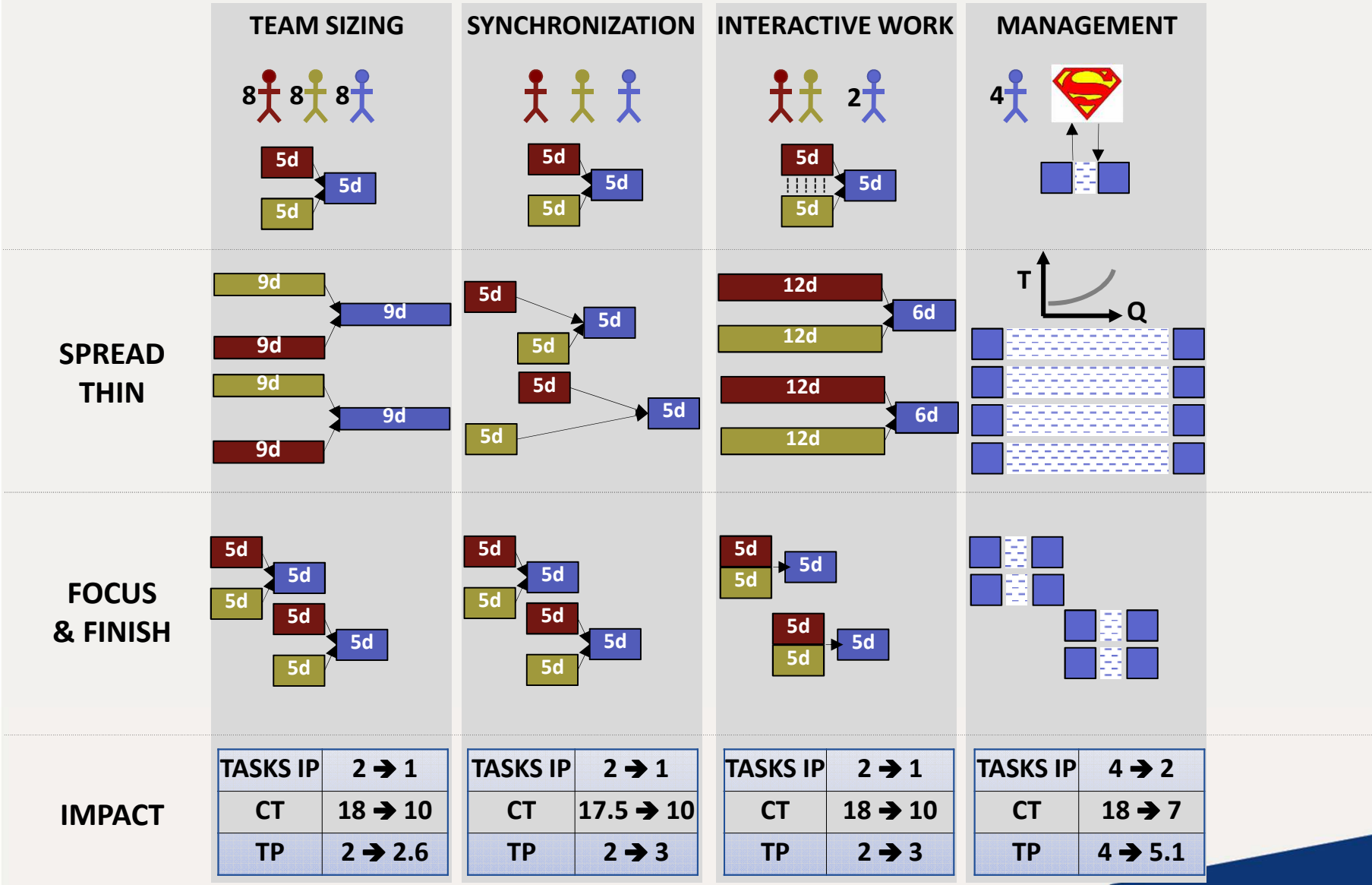
Why Focus & Finish Yields Better Performance

- When resources are spread thin, every task takes much longer; the longer a task takes, the longer the downstream waiting time (ratio of “Touch Time” to “Lead Time” is very high in projects).
- When resources are spread thin, work finishes in bow waves – causing peaks and valleys in workload for downstream resources (even though valleys aren’t easily visible in projects).

EXAMPLES OF 'SPREAD THIN' VS. 'FOCUS & FINISH'



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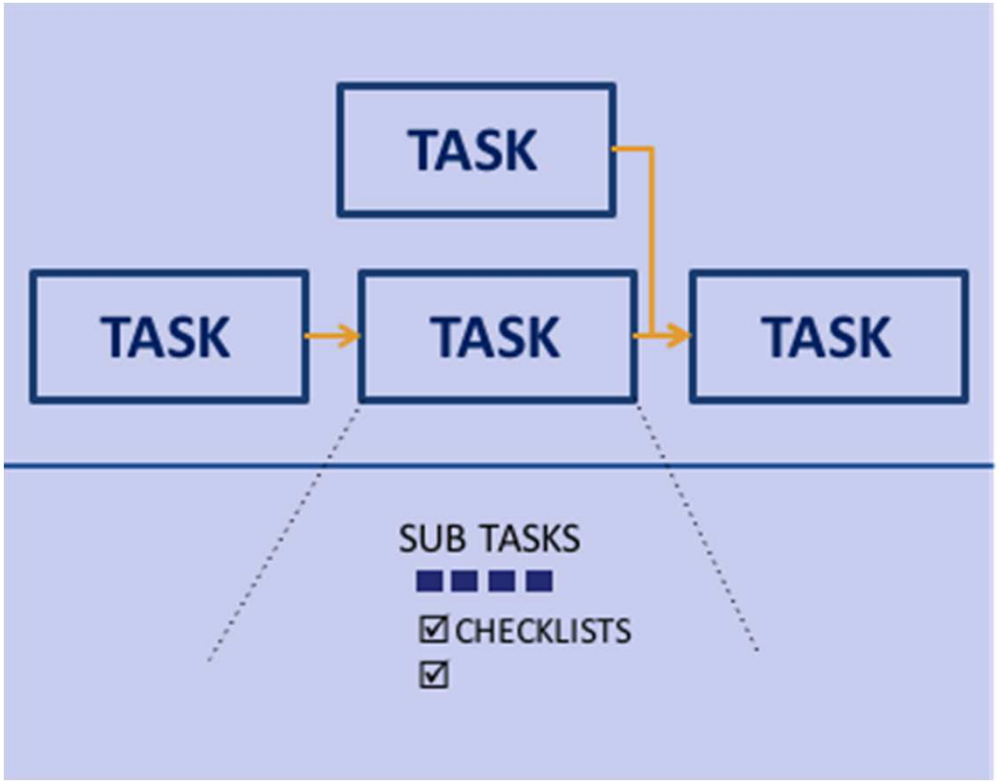
Implications for Planning

Project Planning:
Need 2-Tiered (2T) Tasks

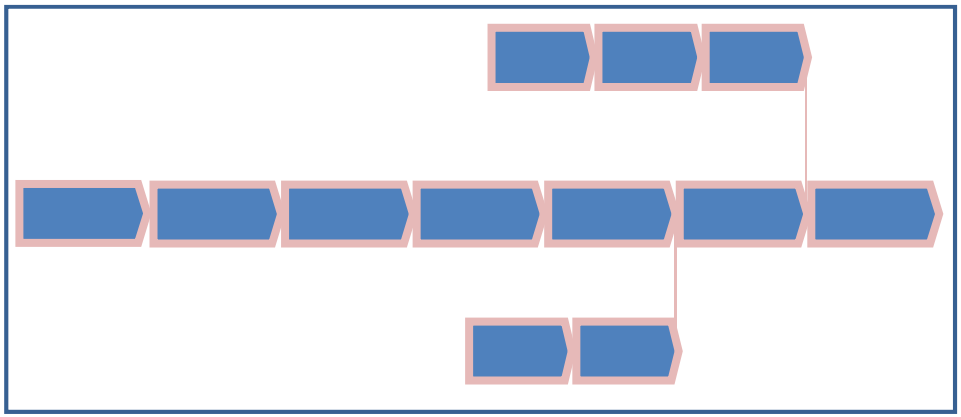


TIER 1
- Enforces "focus and finish"

TIER 2
- Gives flexibility to the lead

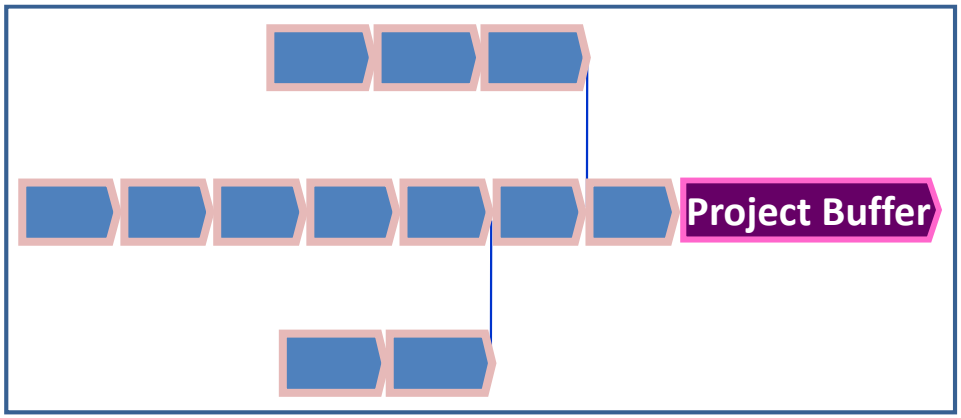
Value of Buffers in a Project Plan: Buffers Create Slack on Feeding Chains; Critical Chain is More Stable in Execution, enabling "Focus & Finish" on Critical Chain.

WIHOUT PROJECT BUFFER



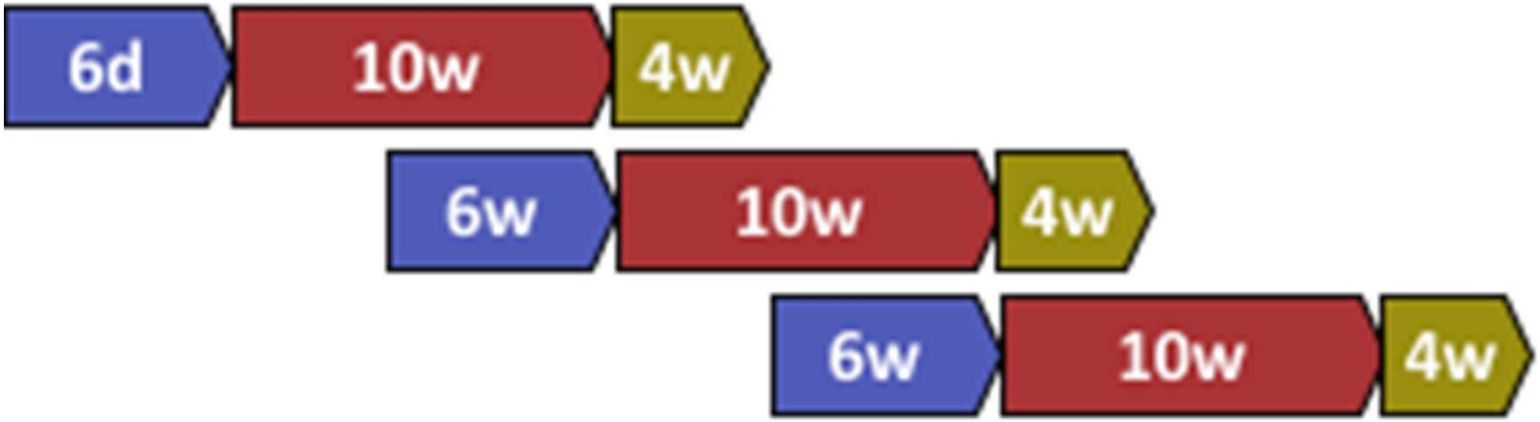
- *Assume each task is 3 weeks long*
- *Critical Path/Chain is 21 weeks*
- *The top feeding chain is 9 weeks long; it finishes 3 weeks before project due-dt. and has zero slack*
- *The bottom feeding chain is 6 weeks long; it finishes 6 weeks before project due-dt. and has zero slack*

WITH PROJECT BUFFER, BUT WITH SAME PROJECT DURATION



- *Moved 1 week from each task on Critical Chain into Project Buffer*
- *Project Buffer is 7 weeks*
- *Top feeding chain now finishes 9 weeks before project end – a slack of 6 weeks*
- *Bottom feeding chain finishes 11 weeks before project end – a slack of 5 weeks*

Staggering of Projects:
Do it on Phases, not Individual Tasks



Sprints:
Scope-Box, Not Time-Box

Sprints are a way to focus on a set of features,
but time-boxing can leave work half-done.
(Backlog and quality issues keep growing.)

A Few Observations

Benefits of CCPM don't come from buffer aggregation.
They come from Focus & Finish.

Converting Waterfall Projects into Sprints encourages Focus & Finish but time-boxing can be counterproductive.

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Focus & Finish isn't just about curtailing individual multitasking. It's more about not spreading resources thin.

Buffer Management can spread your resources thin, unless tasks are structured for Focus & Finish.