

Critical Chain to Accelerate Delivery: A System of Work Based on 'The Rules of Flow'

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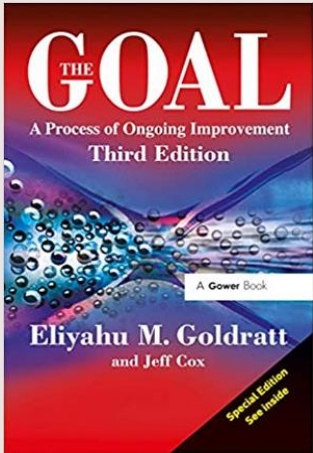
Rene Nibbelke ChPP CQP, Head of Project Management Strategy, *BAE Systems Head Office*

Background – Why Innovate?

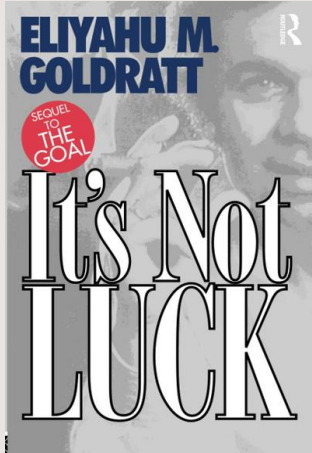
- Customers want faster delivery of capability
- Complex programmes have schedule challenges due to uncertainty
- In addition to product innovation, we need to innovate the way we work
- Impact on staff who can be overwhelmed by project demands and difficulties in prioritising

Increase in Flow and Capacity

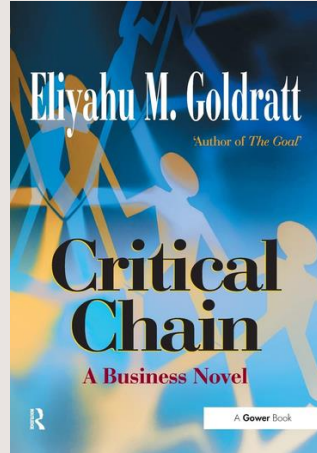
Business Wide



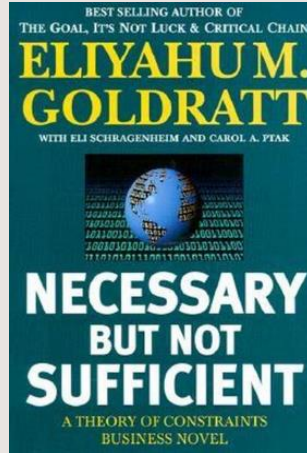
Production



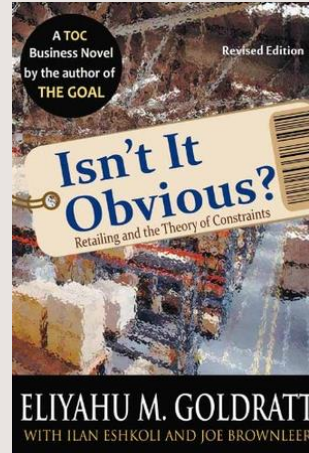
Sales & Marketing



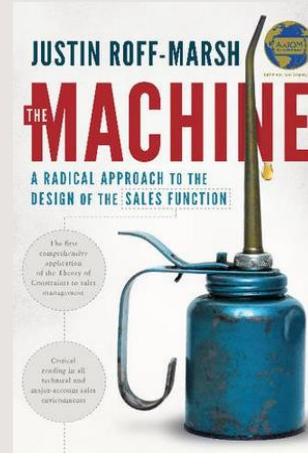
Projects



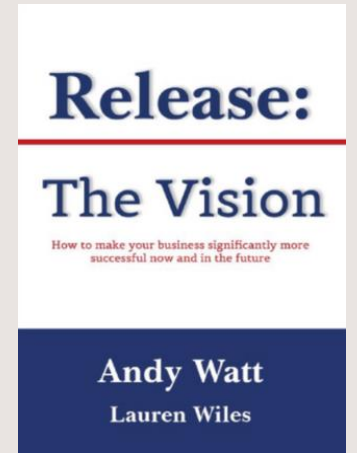
ERP Systems



Retail & Supply Chain



Sales

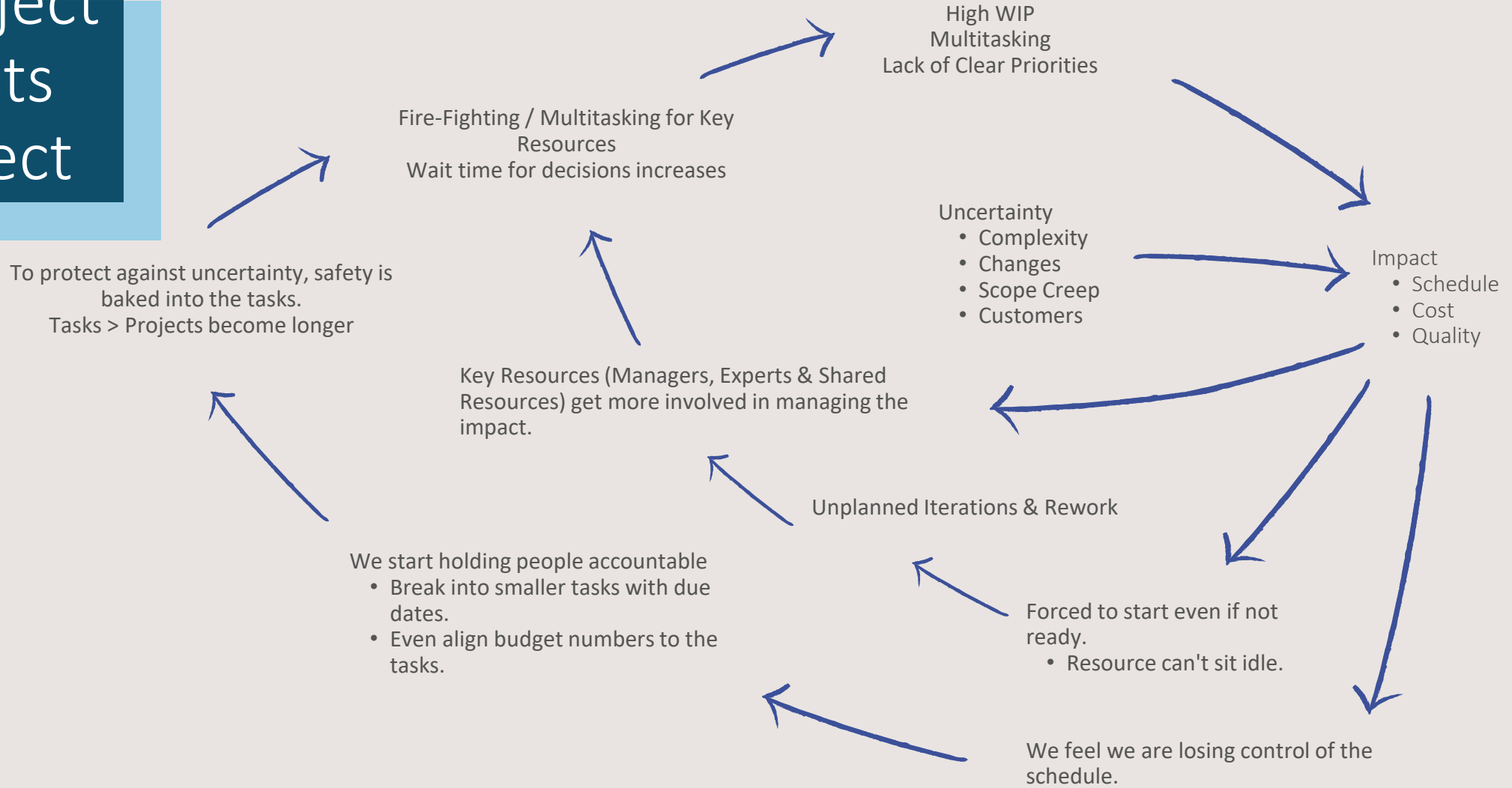


Holistic

Theory of Constraints

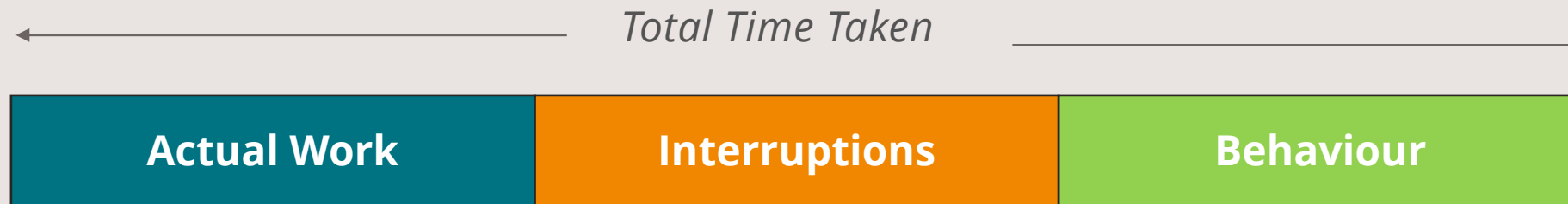
- Aims to continually achieve more of the goal of a system.
- Focuses on achieving breakthroughs in performance quickly in large complex environments, dominated by high uncertainty.
- Flow and capacity improvements in any business.

Generic Project Environments Cause & Effect

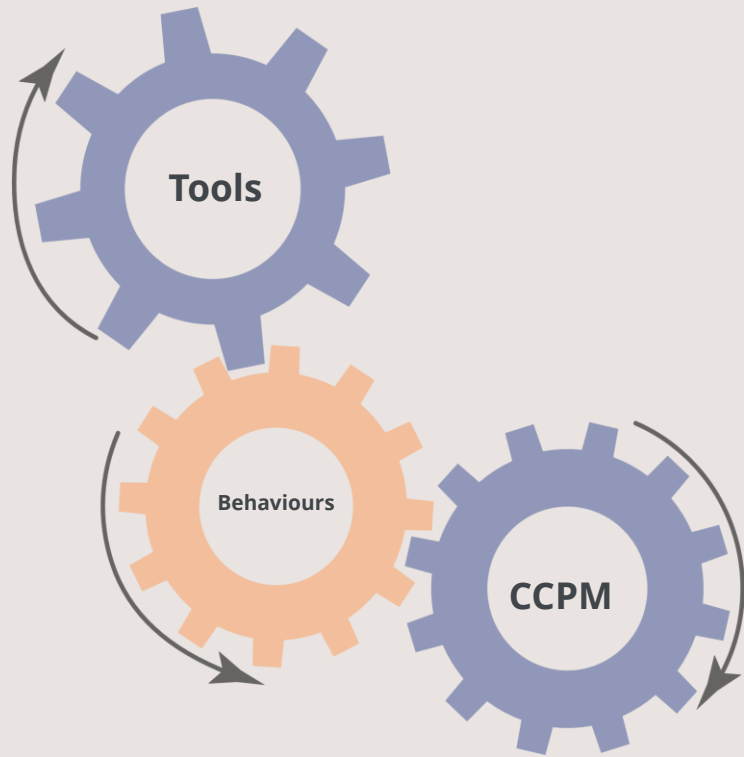








Behaviours

1. Estimates turn into commitments.
2. Gains are not transferred.
3. Travelling work.
4. Parkinson's Law.
5. Leaving tasks to the last minute (Student's Syndrome) usually means Murphy's Law kicks in.



CCPM Elements



- 
Constraint Focus to Maximise Output
- 
Buffers to Cope with Uncertainty and Remove Local Sub-Optima Behaviour
- 
Low WIP to Reduce Multi-Tasking Costs
- 
Full Kit & Handovers to Reduce Task Switching, Delays and Rework
- 
Release Gate to Reveal Non-Constraint Capacity Opportunities
- 
Managing Interruptions to Increase Capacity

Ten Rules of Flow

1. **REDUCE THE WORK IN PROGRESS** - Reduce the number of live projects and tasks that are allowed to be worked on.
2. **COMPLETE FULL KITS** - Only release tasks to resources when they have everything they require to complete the task. Focus on enabling 'Full Kit' well ahead of time.
3. **RELEASE TO CAPACITY** - Release tasks in the correct sequence and priority to maintain the optimal level of Work In Progress.
4. **REDUCE MULTI-TASKING** - Minimise interruptions for people to allow them to 'focus upon and finish' each task as quickly as possible.
5. **SERVANT LEADERSHIP** - Ensure management and expert resources have the visibility, availability and are actively supporting daily recovery actions.

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Ten Rules of Flow

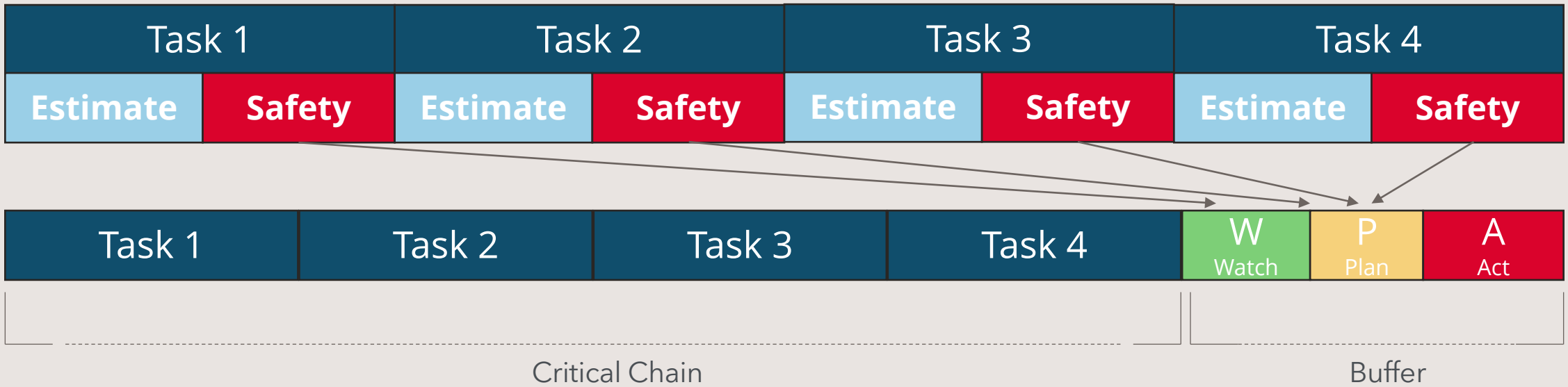
6. **CLEAR DEFINITION OF DONE** - Ensure the project scope is clearly documented and communicated, with all the tasks in the plan having a clearly defined criteria for handover and Completion ('Done').
7. **PLAN FOR UNCERTAINTY** - The rolling wave plan has logically linked tasks of the right size. Position visible buffers to protect it from the uncertainty and changes to it in execution.
8. **FOCUS ON THE CONSTRAINT/INTEGRATION POINT** - Stagger the projects in the portfolio to synchronise resources and ensure they are not overloaded.
9. **THE PAST IS THE PAST, FOCUS ON REMAINING DURATION** - Report the remaining duration of all (open) project tasks every day. Identify where and when to actively manage with fast recovery actions.
10. **MEASURES DRIVE BEHAVIOURS** - Replace local operating measures that do not support the behaviours wanted with different measures aligned to deliver the project on time.

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Protect Plans

Individual safety is wasted in execution.

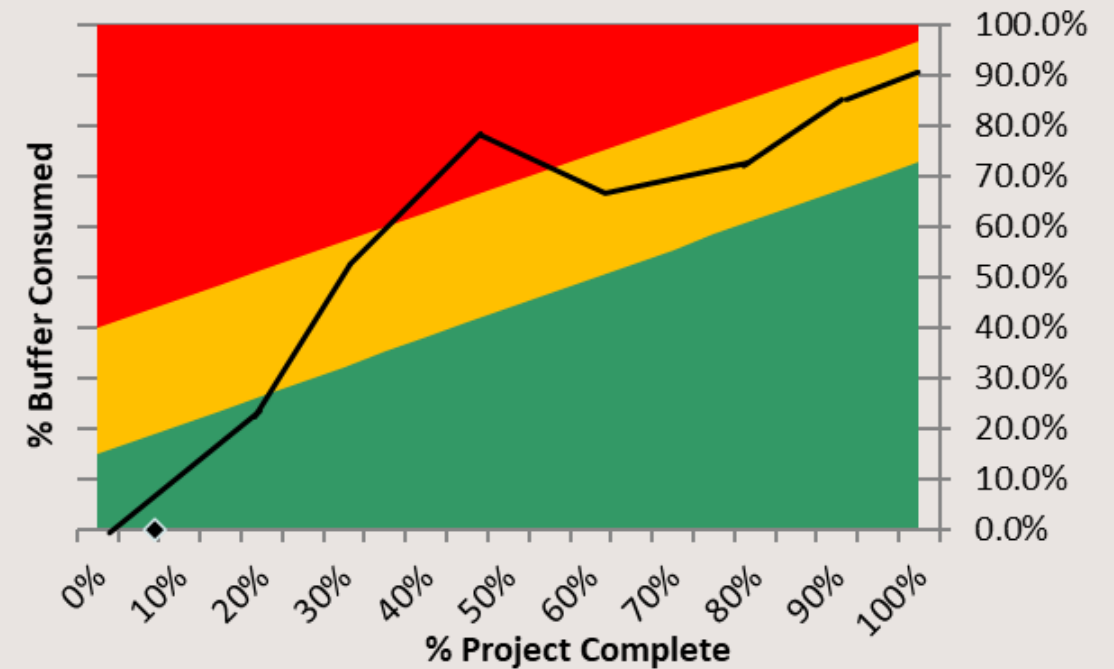
Aggregating safety and making it visible better protects us from uncertainty in execution and makes individual task durations shorter.



Managing Execution

- Everyday measure rate of project completion against consumption of project contingency (Buffer)
 - Buffer being used faster than rate of project completion – Recovery actions **MUST** be identified and carried out.
 - Buffer being used slower than rate of project completion – No action necessary.

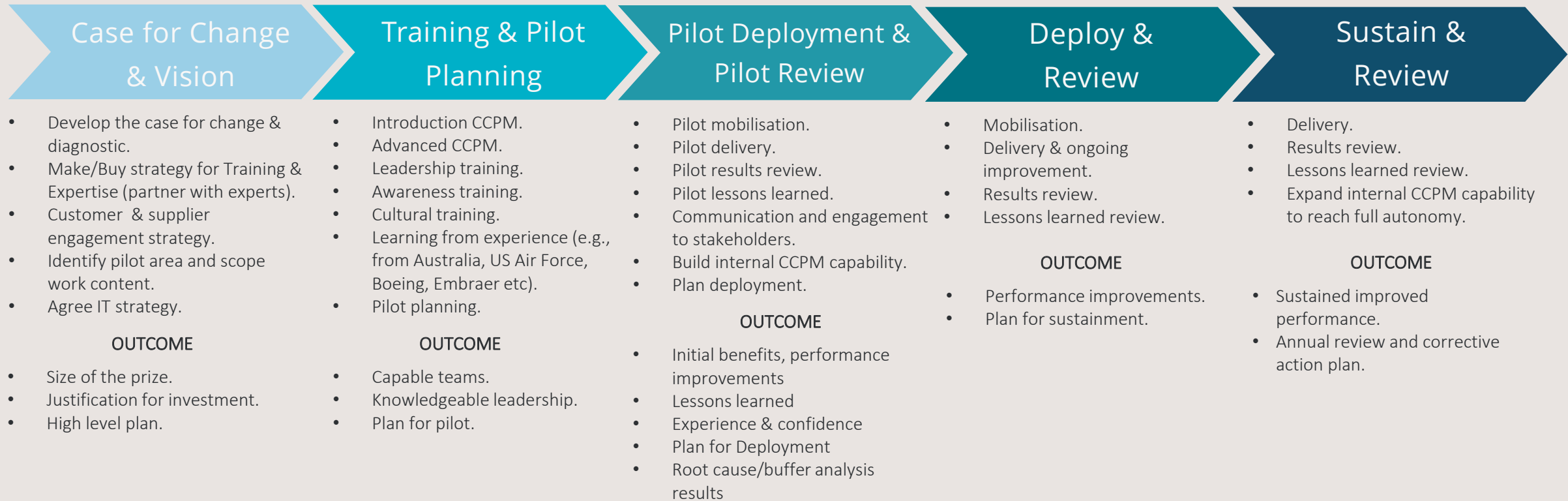
Fever Chart



Challenging Existing Approaches

- a. Estimating – old way, new way.
- b. Rolling wave planning vs. detailed long-term planning.
- c. Re-planning.
- d. Back to basics.
 - i. PERT.
 - ii. Full kit and definition of done – back to basics.
- e. Measurement.
- f. Reporting:
 - i. Drumbeat daily, not weekly or monthly.
 - ii. Focus on remaining duration, not backward-looking percentage complete.
 - iii. Task management recovery actions.

How to Implement?



Lessons Learned

Enablement

1. Active Leadership and Sponsorship.
 - Number one improvement priority for the business and the leaders.
2. CCPM Champion has enough capacity to lead the implementation.
 - Must have enough time available to provide the necessary focus.
3. Core cross-functional team with the management authority and capacity to execute.
 - Must represent management of all the functions in the business.

Plan

4. Implementation plan agreed and managed to hit a due date.
 - Too slow and we lose momentum, no change control in place we do not understand the impact of delays to the schedule (in benefits, scope and costs).
5. The rules of flow implemented in the right sequence to generate big wins quickly
 - Without the changes to the behaviours and system of work, buffer management will have little impact.

Execution

6. Manage the number of released tasks on the plan.
 - Too many WIP tasks delays flow.
7. Maintain understanding support and morale throughout the implementation of all people.
 - Weekly communication of the effects in performance and progress.

Questions & Answers