Speeding Innovation to Market: More Projects in Less Time Using Project Management Execution

Cambridge Technology Organizations (CTO) Peer 2 Peer Network

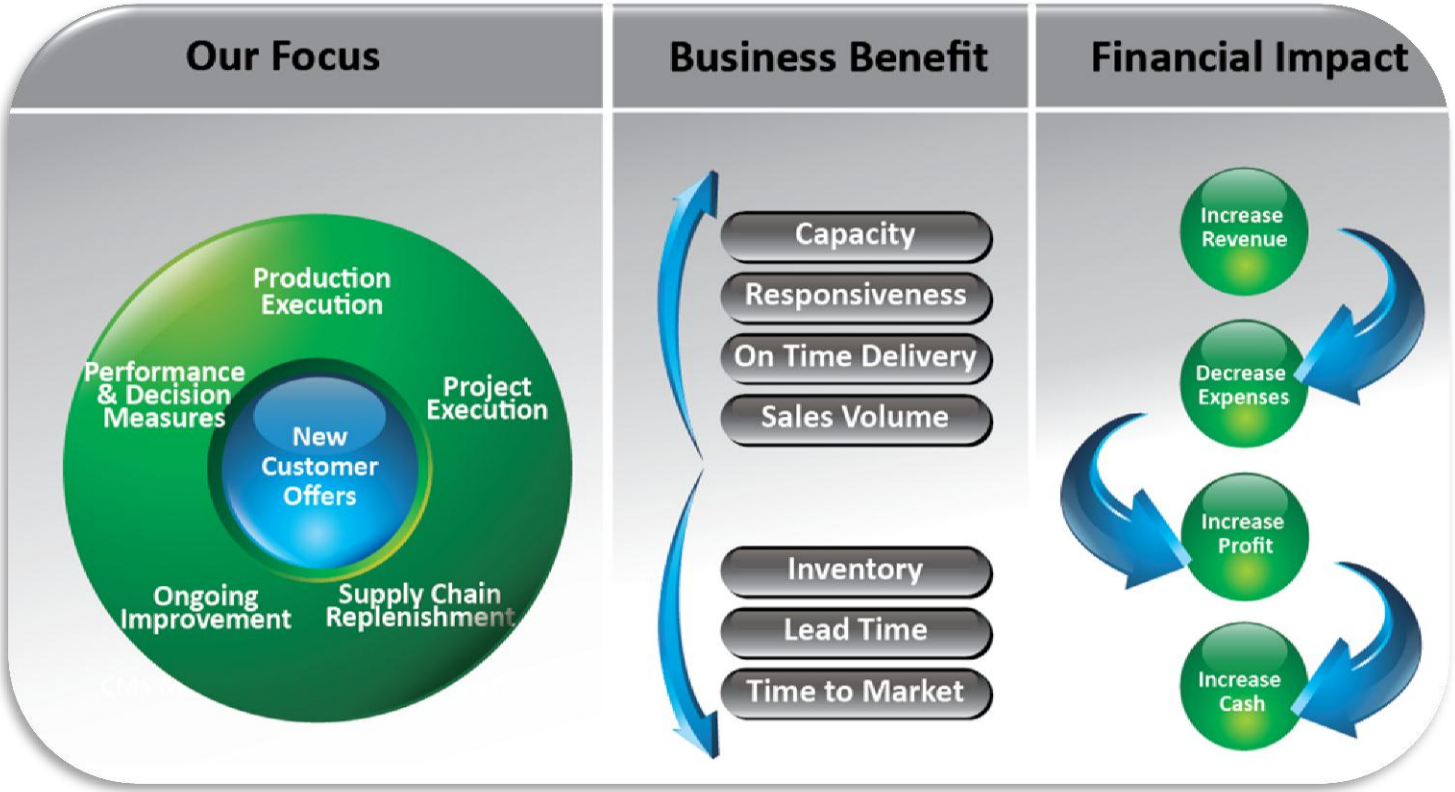
Communitech

October 18, 2011

Cambridge Mill

Who is CMS Montera?

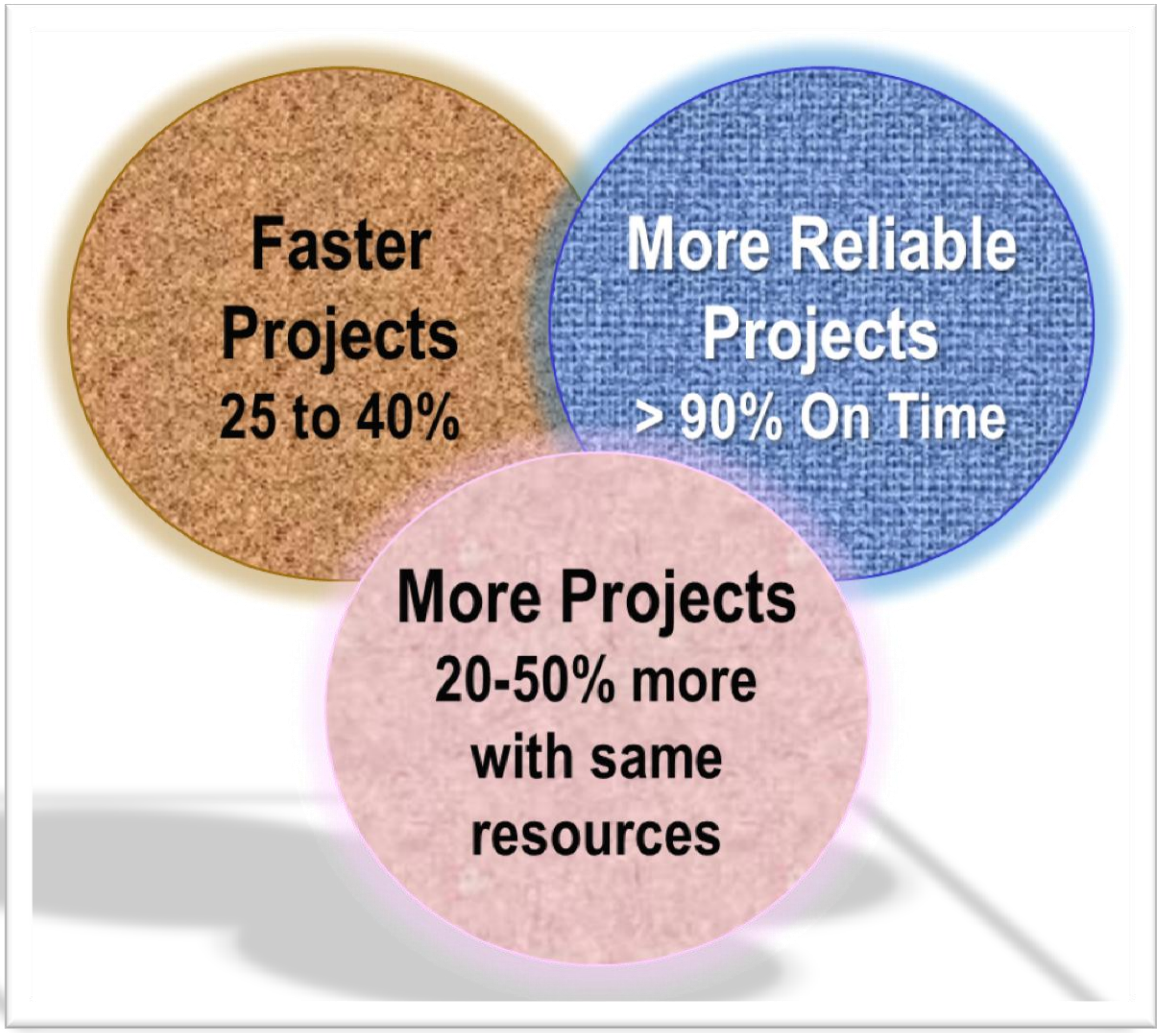
- CMS Montera provides management solutions and software to improve operational performance and sales.



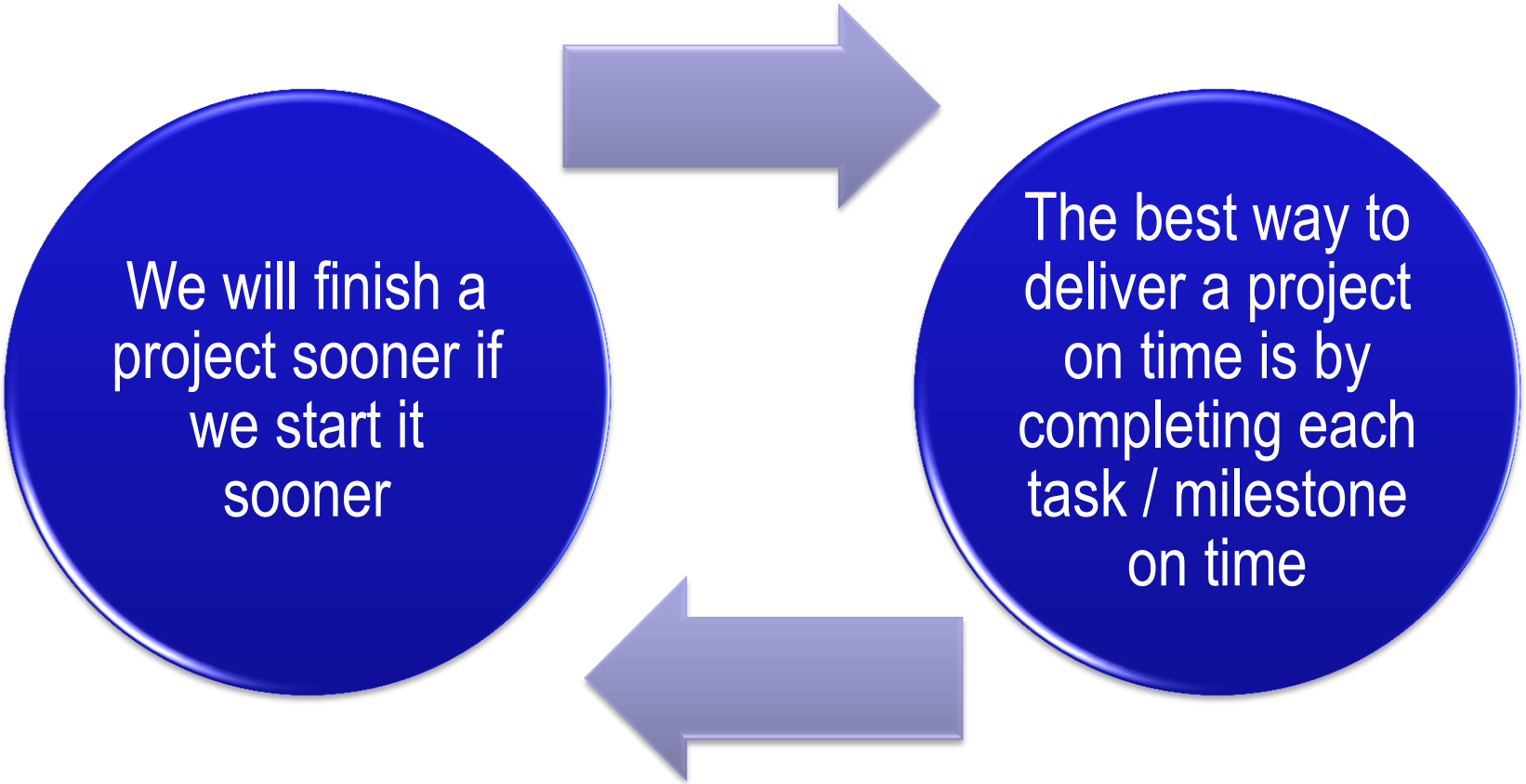
Critical Chain gets Results

	Before	After
Northern Digital	50% on time, 10 projects	92% on time, 13 projects
ABB AG. Power Technologies Division	Throughput of 300 bays per year	Throughput increased 430 bays per year
Alcan Alesa Technologies Material Handling Solutions	6.9 projects per year	10 proejcts in the first 8 months
Alcatel Lucent Telecom Switches Design	300 – 400 active projects with over 30 per month	Throughput up by 45% per person. LT down 25%
Delta Air Lines Inc. Aircraft Engine Repair	476 engines per year	586 engines per year. 50% LT reduction inlanding gear
HP Digital Camera Group – Product Development	6 Cameras launched / year 1 out of 6 launched on time	15 Cameras launched / year All on time
Ismeca Semiconductor - ETO	84 days cycle time 15 machines in 8 months	64 days cycle time 22 machines in 5 months
Dr. Reddy's Laboratories - NPD	20% OTD 85 product launches / year	80% OTD 149 product launches / year

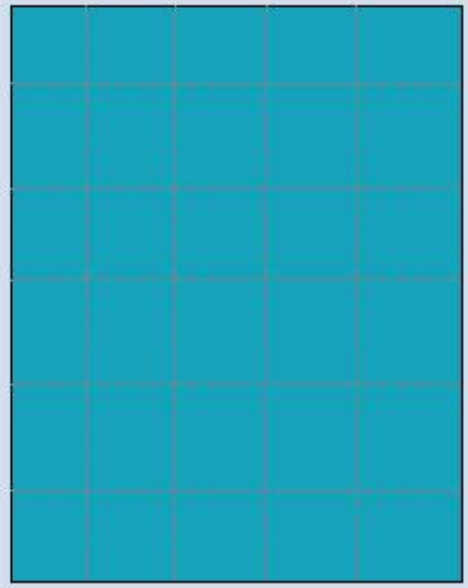
CCPM Gets Results - Summary

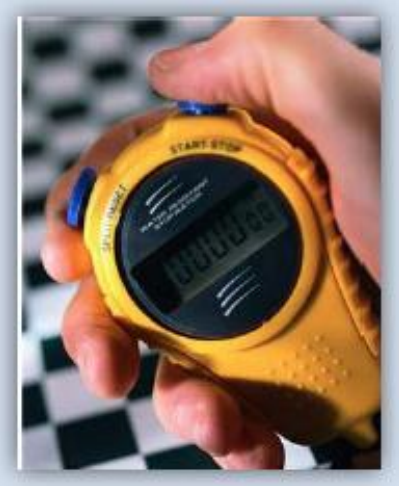


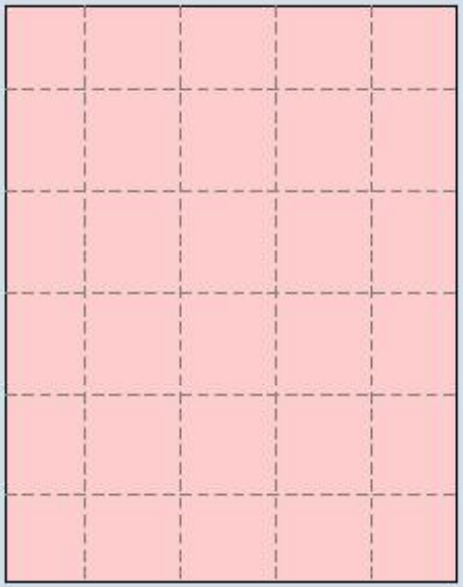
True or False …



The Paper Game







Round 1

- Two Projects - Two pieces of paper of different colour
- Tear each piece of paper into 5 strips and then 6 pieces
  - How many pieces of paper should we end up with?
- After three tears of one paper colour (Project 1), switch to the other paper colour (Project 2), and then switch back
- Measures
  - Cycle Time – Time to complete each project
  - Good Quality – 30 pieces of each colour

Round 1

- Measures
  - Range
  - Good Quality
- How many more projects can you handle within the same time frame?
- Did the colour of the paper matter?

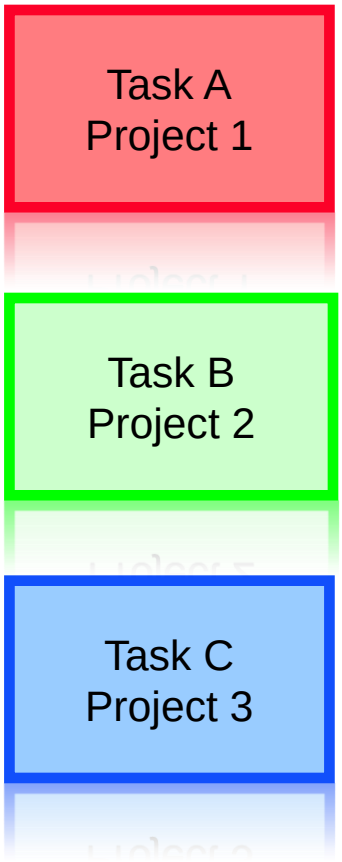
Round 2

- 1 Project at a time
- 5 Strips and 6 Pieces
- Same measures

Observations

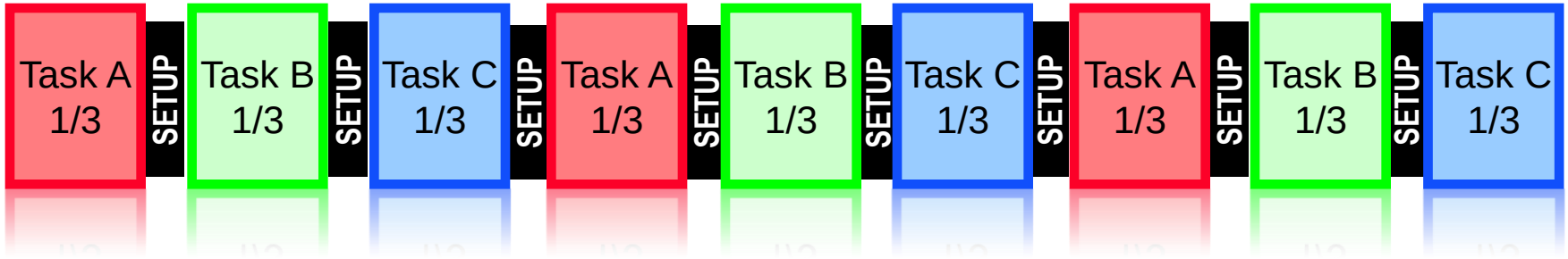
- Round 1
  - Busy, bad quality
- Round 2
  - Reduced variability
  - Increased quality
  - ½ the time

Bad Multi-Tasking

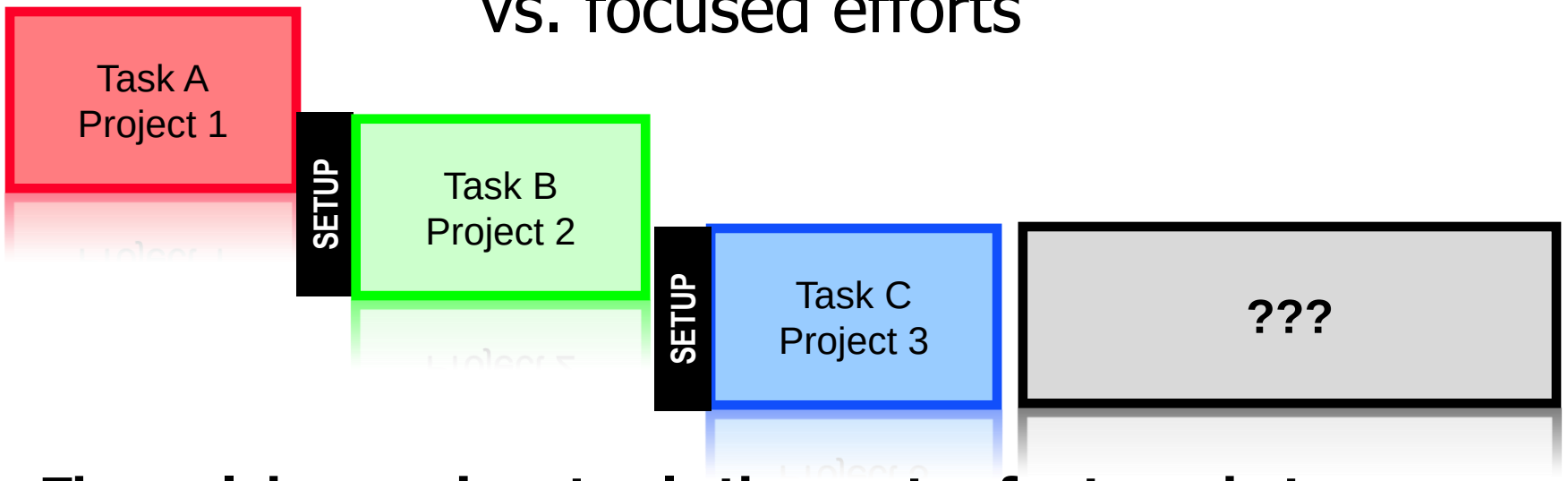


Three tasks arrive at the same time for the same resource. All projects are essential for success of the program – what does the resource do?

Bad Multi-Tasking

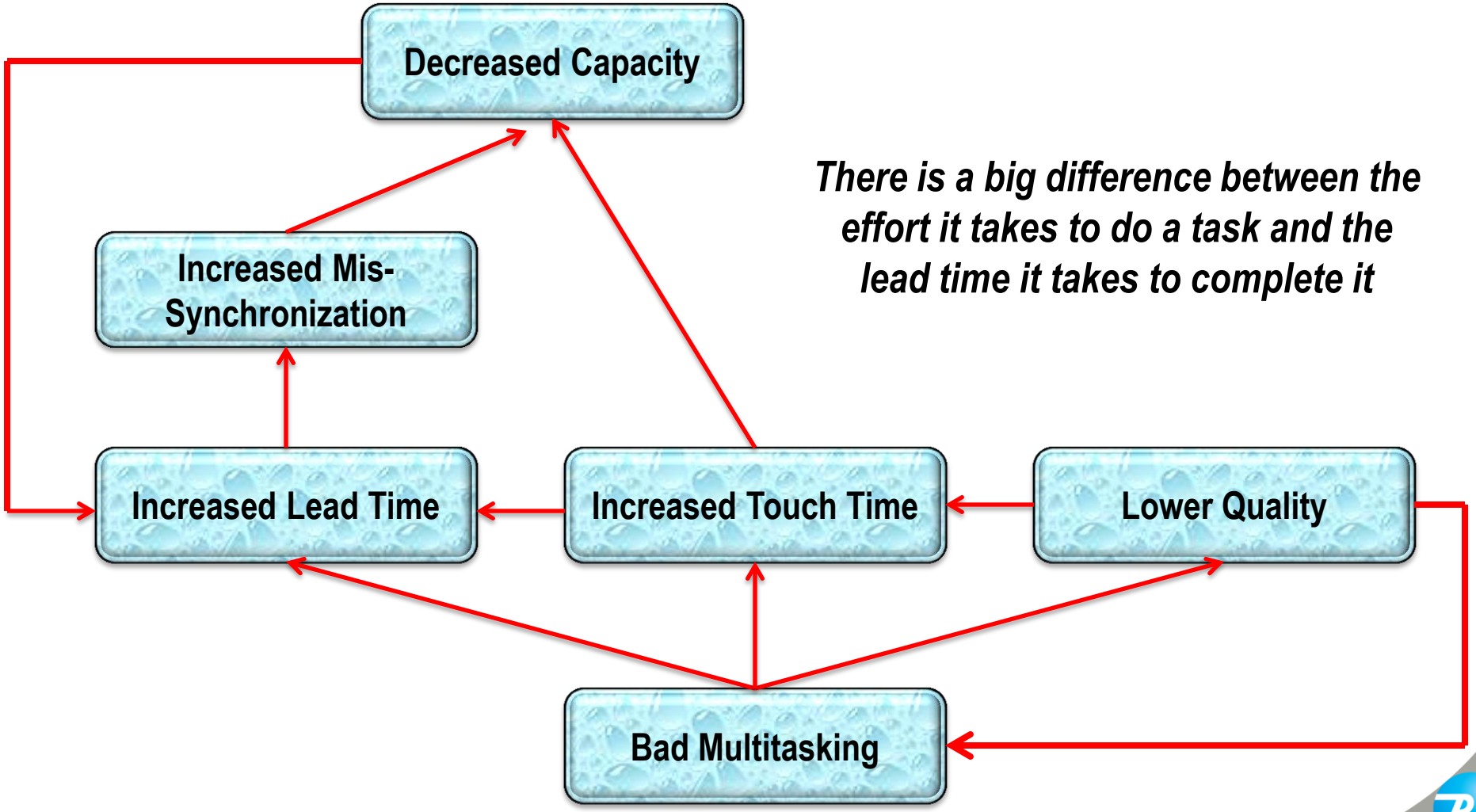


vs. focused efforts



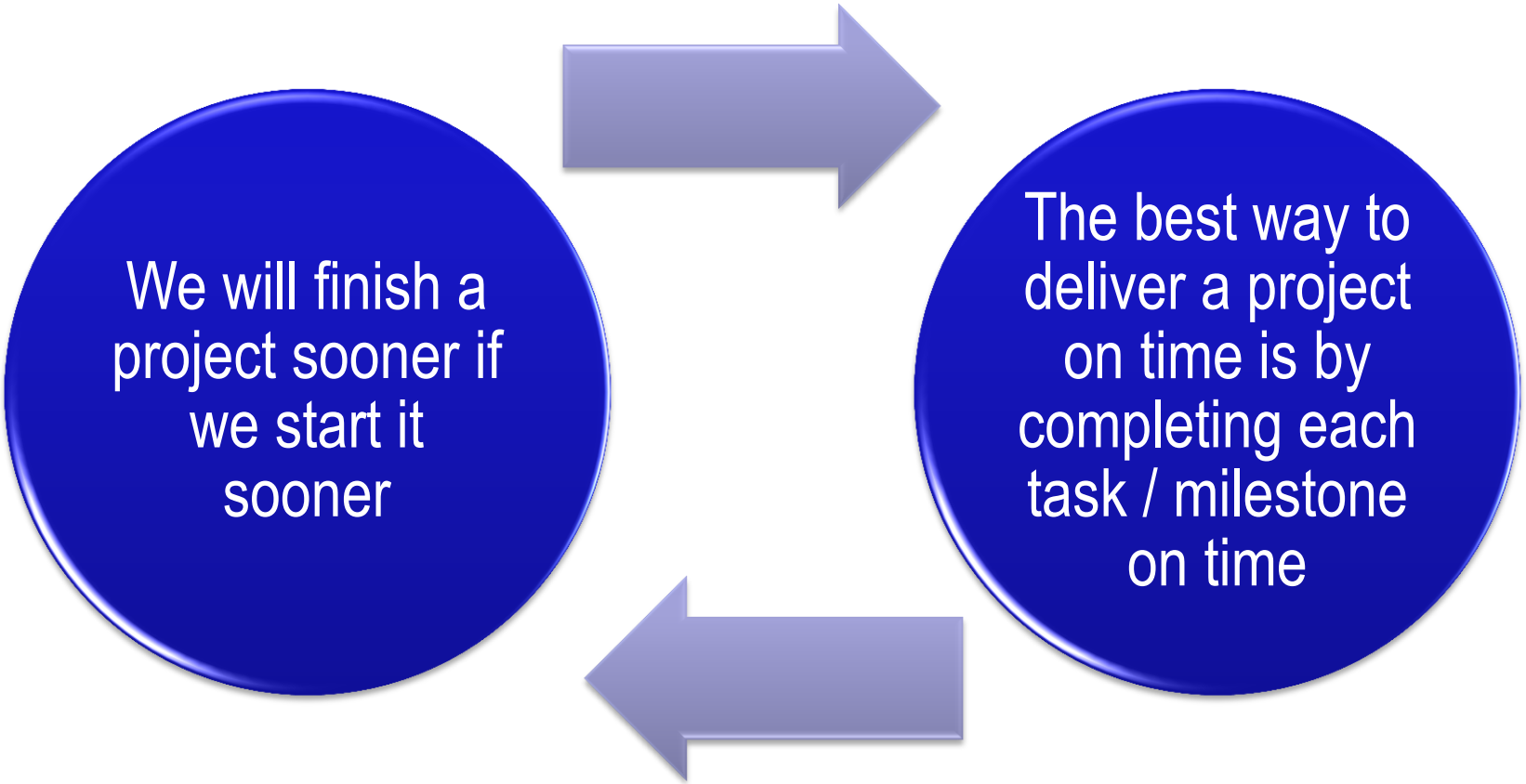
The real damage is not only the waste of set-ups but also the significant increase in the lead time of each task, and …

Bad Multi-Tasking

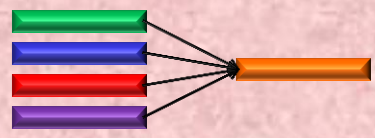
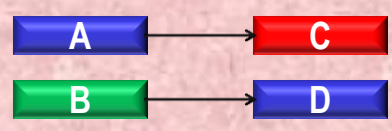


There is a big difference between the effort it takes to do a task and the lead time it takes to complete it

True or False …



Because of …

Parkinson's Law		Work expands to fill the time available
Student's Syndrome		Work gets delayed until the 'last' minute
Integration Points		Finishing one task on time is not enough, unless all tasks are complete
Resources with Multi-Task		Finishing one task on time is not enough, unless the resources are ready

Task Delays often accumulate

Task Gains are usually wasted

Summary

The typical Project Management approach creates three significant issues …

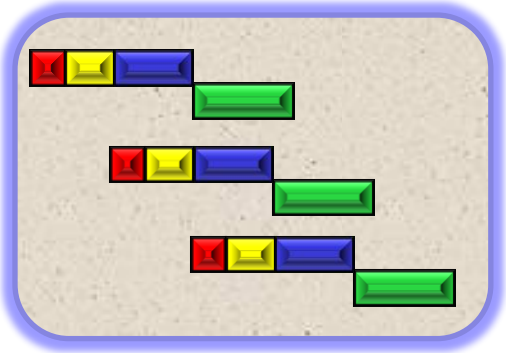
- Too Much Bad Multi-Tasking
- Task Delays often accumulate
- Task Gains are usually wasted

… Which causes most projects to be late, over budget and / or under scope

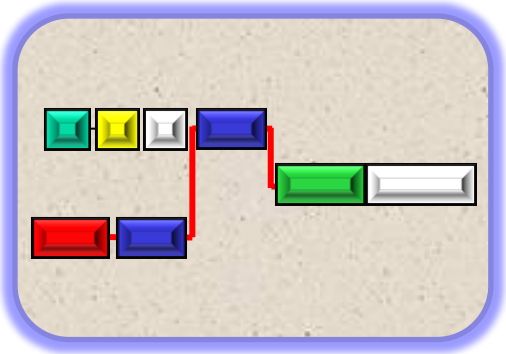
Critical Chain Project Management

- **Stagger** the release of projects into execution
- Create aggressive project schedules with 50% **buffers**
- Drive execution **priorities** based on buffer consumption

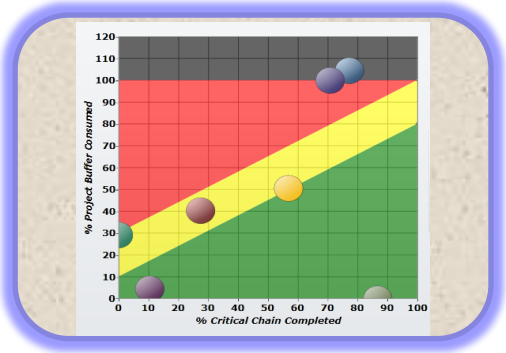
Stagger



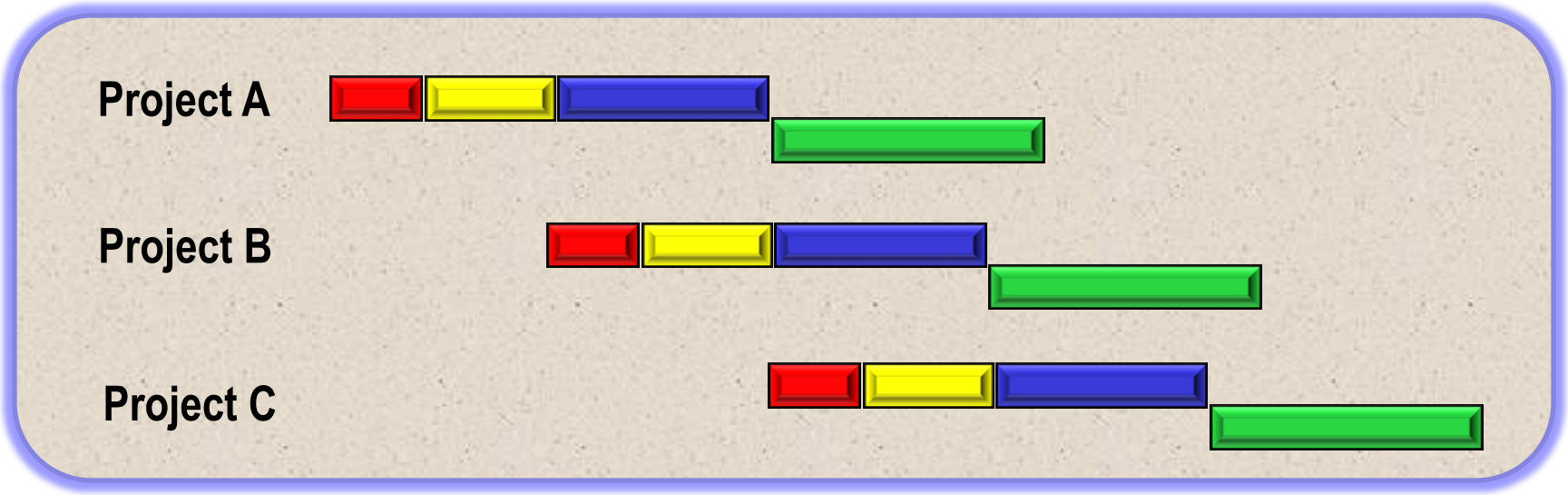
Buffer



Prioritize

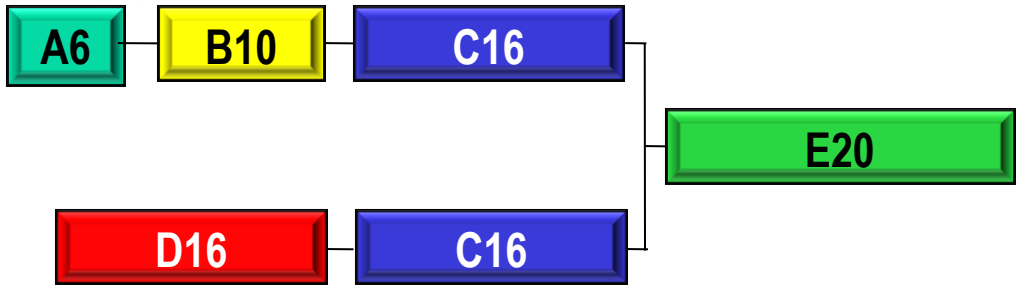


Stagger – Choke the Release



- Identify the staggering point / resource
- Establish the maximum load / number of projects to be released
- Release a new project ONLY when another project is completed through the staggering point

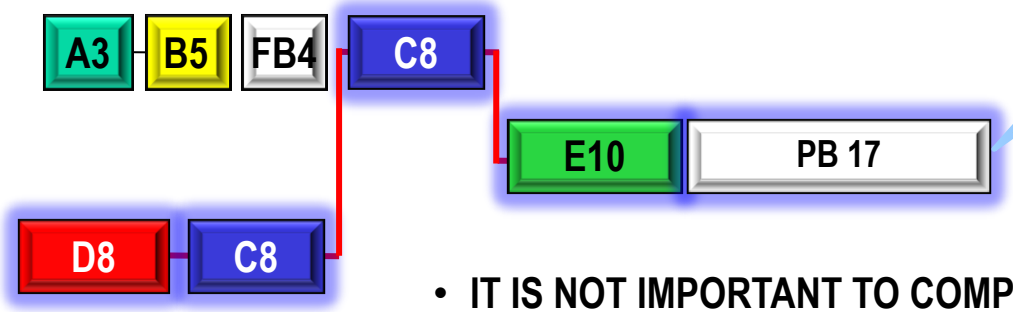
Buffer – CCPM Network



Critical Chain – the longest chain of task and resource dependencies

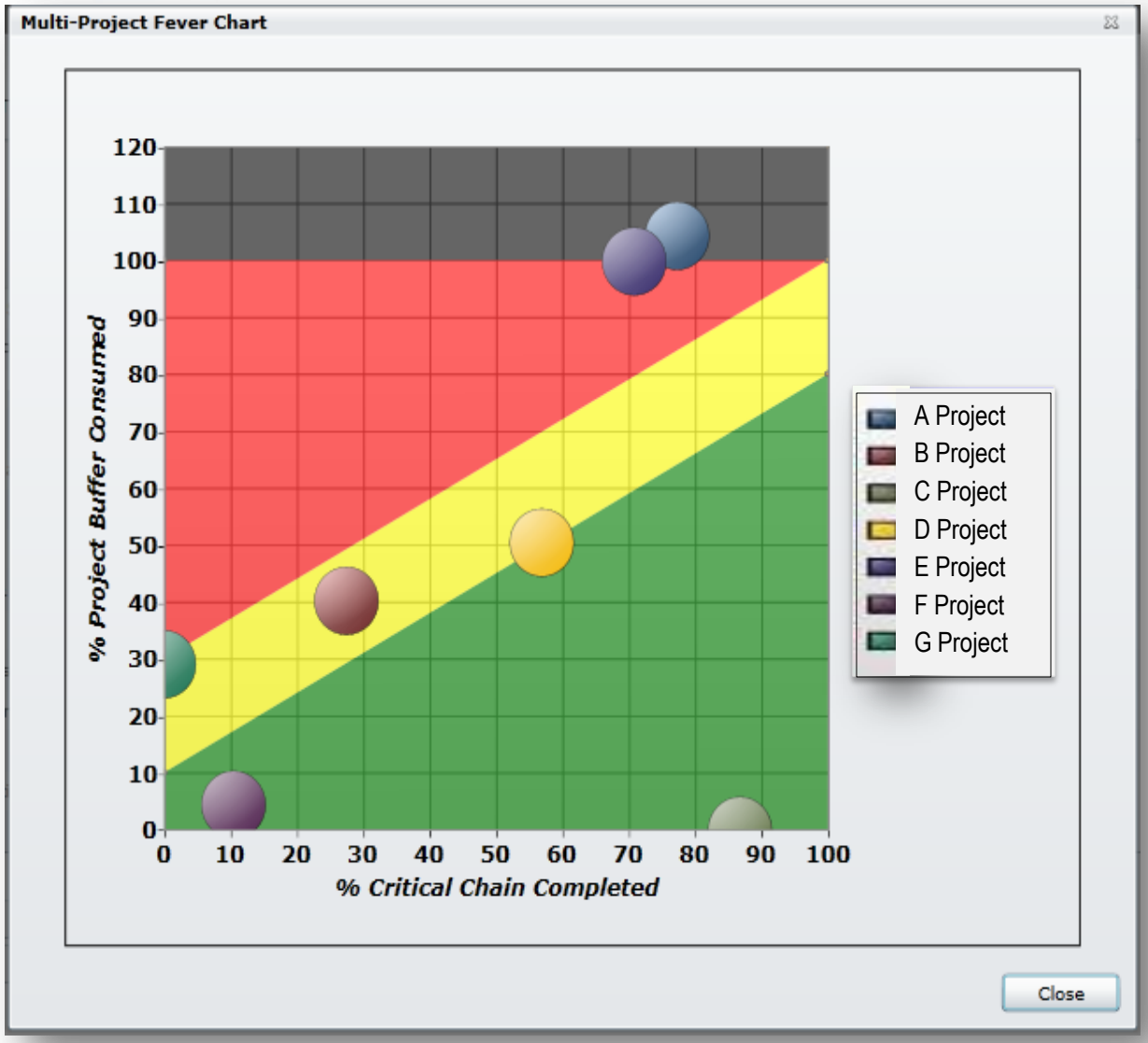
- Cut task estimates in half
- Push tasks as late as possible
- Resolve resource contentions
- Identify Critical Chain (CC)
- Protect with 50% Buffers – Project (PB) and Feeding (FB)

Projects progress is based on the ratio of the CRITICAL CHAIN complete to the PROJECT BUFFER consumed (Flow Index)



- IT IS NOT IMPORTANT TO COMPLETE EACH TASK ON TIME
- IT IS CRITICAL TO COMPLETE THE PROJECT ON TIME

Prioritize – Projects



Fever Chart

- Flow Index = % CC complete / %PB consumed
- Drive priorities based on Flow Index
- Used to monitor project progress
- Allows project comparison

Lowering Project Costs and Increased Sales

Increased Sales

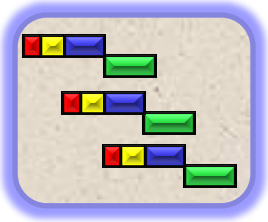
LOWER COST | HAPPY CUSTOMERS | MORE CAPACITY

25% to 40% Faster

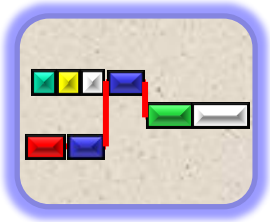
> 90% On Time

20% to 50% More

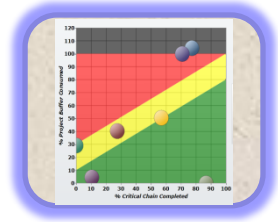
Stagger



Buffer



Prioritize



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