

- Theory Of Constraints expert.
31 years of TOC experience. Started working with the founder Eliyahu Goldratt in 1986.
- Lean expert.
33 years of experience in Lean. Assists some of the Leanest organizations in the world.
- >25 years of experience helping over 200 companies in all industrial sectors.
- CEO of Marris Consulting
based in Paris, France.

Motto: *Factories, People & Results*



contact@marris-consulting.com

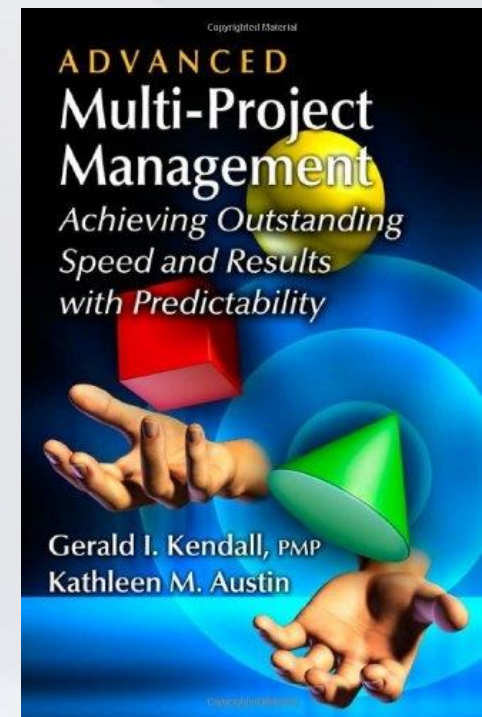
+33 (0) 1 71 19 90 40

Critical Chain has demonstrated its ability to greatly improve performance

- Finish projects on time, without budget overruns nor loss of initial specifications...
- ...and significantly reduce project durations and productivity.

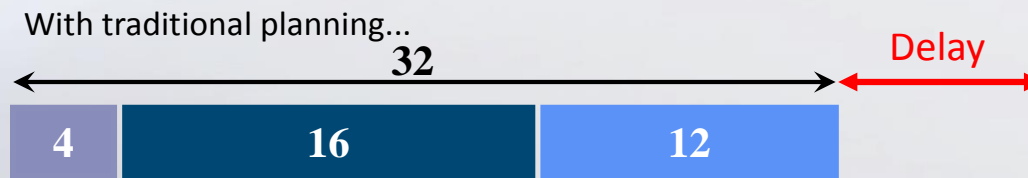
Results	Average	Worst case	Best case
Project durations	-39%	-13%	-78%
Number of Projects completed in a given time	+70%	+15%	+222%
Throughput	+53%	+14%	+150%

Source: "Advanced Multi-Project Management Achieving Outstanding Speed and Results with Predictability" 2013 book by Gerald I. Kendall & Kathleen M. Austin, page 95. The analysis is based on public information available concerning 60 different organizations working in different industries that had applied CCPM.



Critical Chain aims at protecting the whole project, not the individual tasks

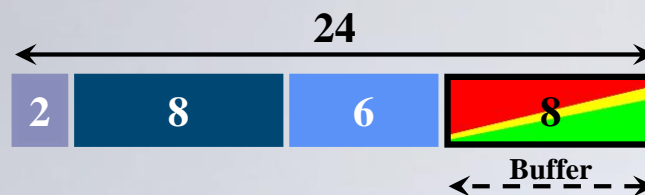
- All project tasks have significant security margins, but they are wasted (Student syndrome, Parkinson's law, multitasking ...).
- With the Critical Chain approach, these margins are reduced and mutualized in a buffer at the end of the project.



... each task has its own margin

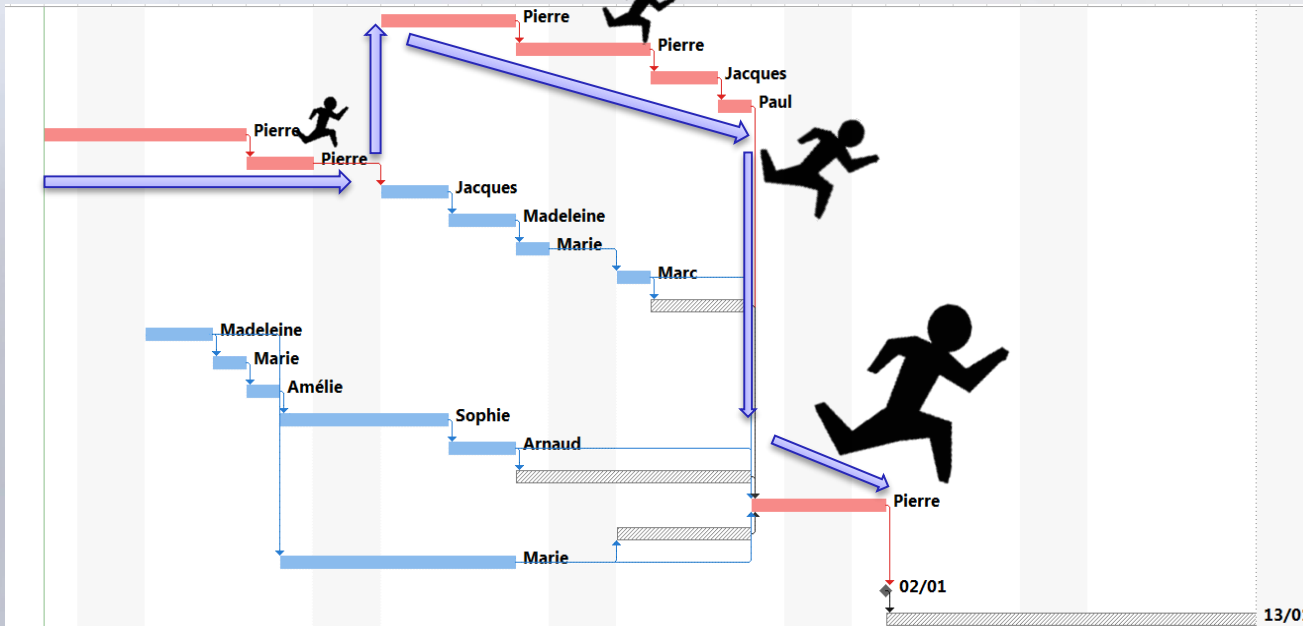


With Critical Chain, margins are mutualized and cycle times are challenged



Then during the project execution, we focus on tasks on the Critical Chain

- The Critical Chain is the longest sequence of tasks of a project, taking into account logical links and resource dependencies.
- The project is like a relay race throughout the Critical Chain.
- Having a mascot (a noticeable object) enables one to follow physically the progress along the Critical Chain.

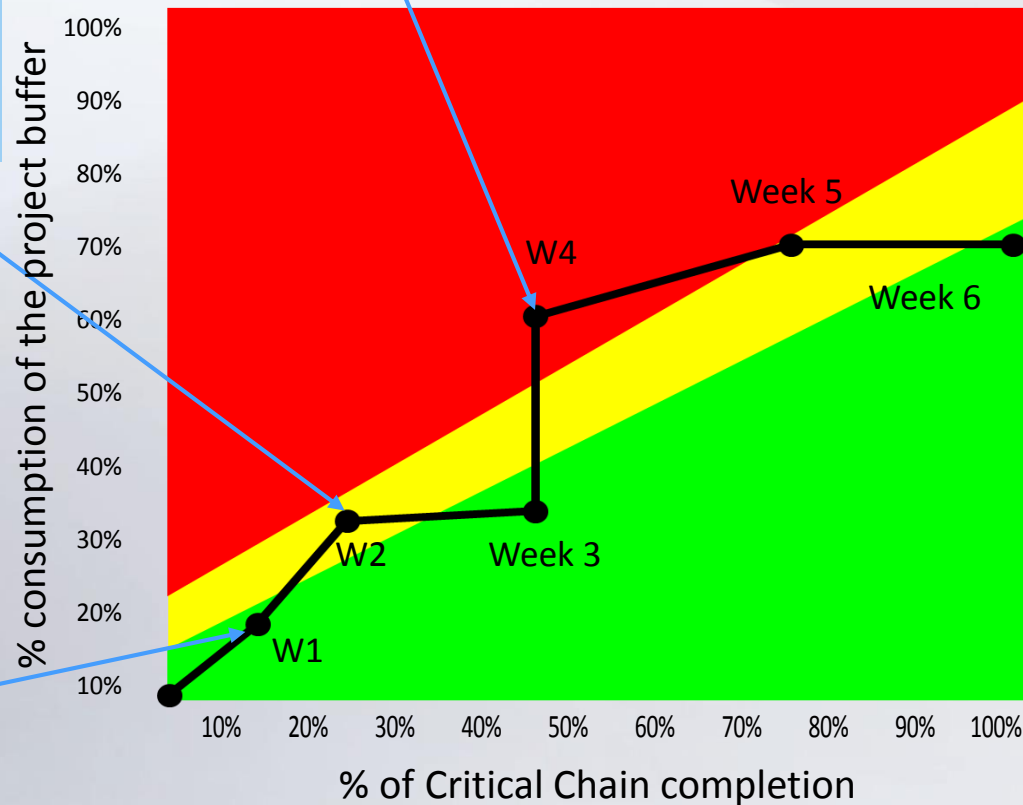


Monitoring progress is much easier thanks to the Project Fever Chart

Yellow zone = warning zone → identify main cause of delay and prepare action plan

Green zone = comfort zone → no action needed

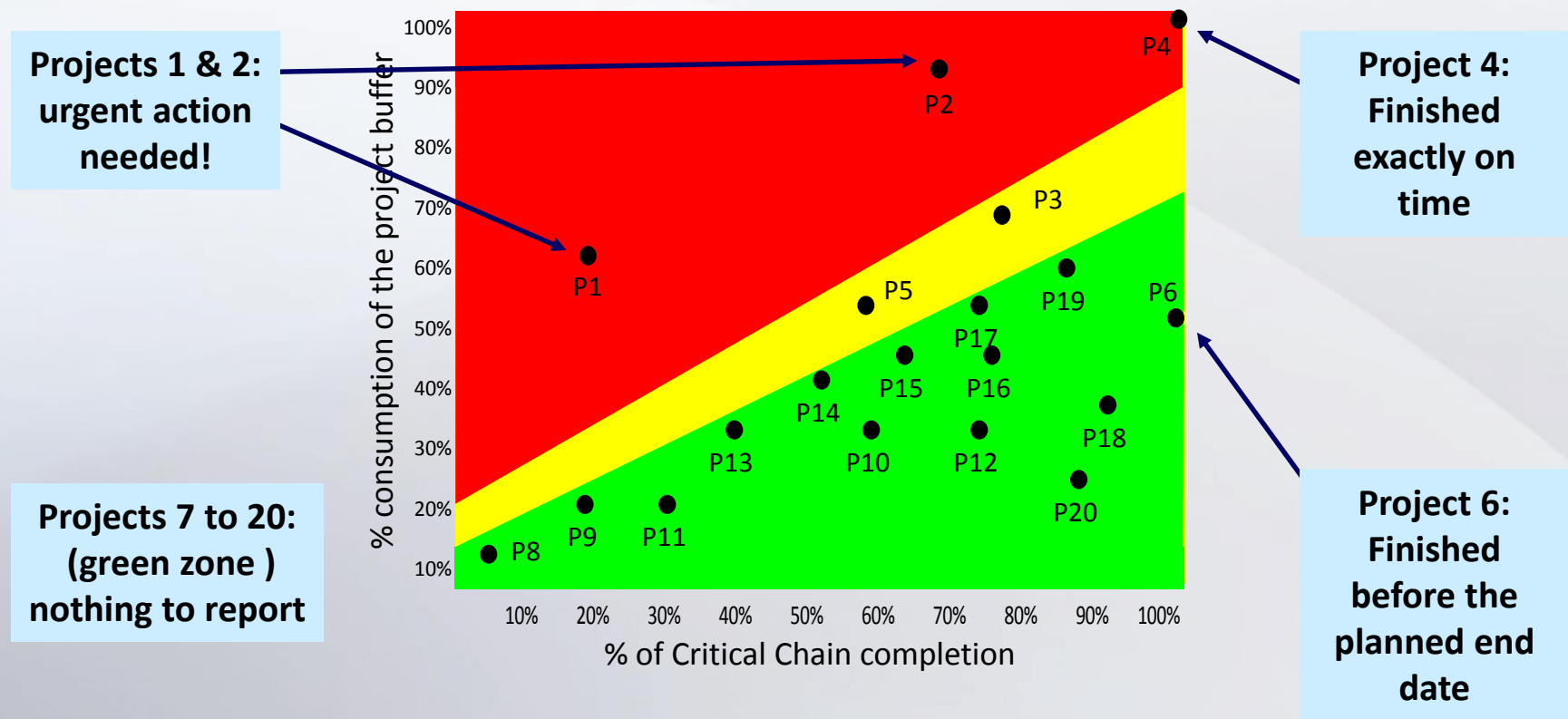
Red zone = risky zone → start right now corrective actions



Finished project with project buffer not fully consumed.

This means that the project finished **before** the planned end date.

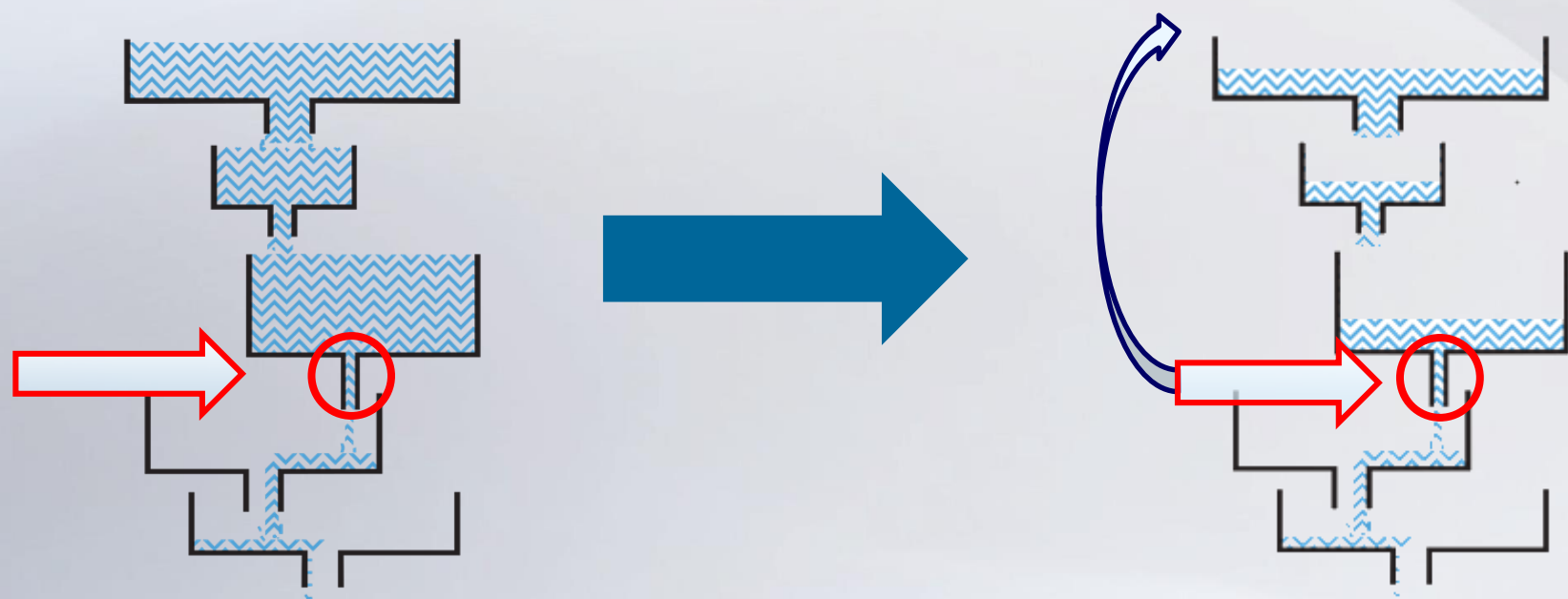
The Portfolio Fever Chart greatly facilitates dynamic arbitration between projects



The Portfolio Fever Chart helps to quickly track all the projects in the portfolio with objectivity and transparency

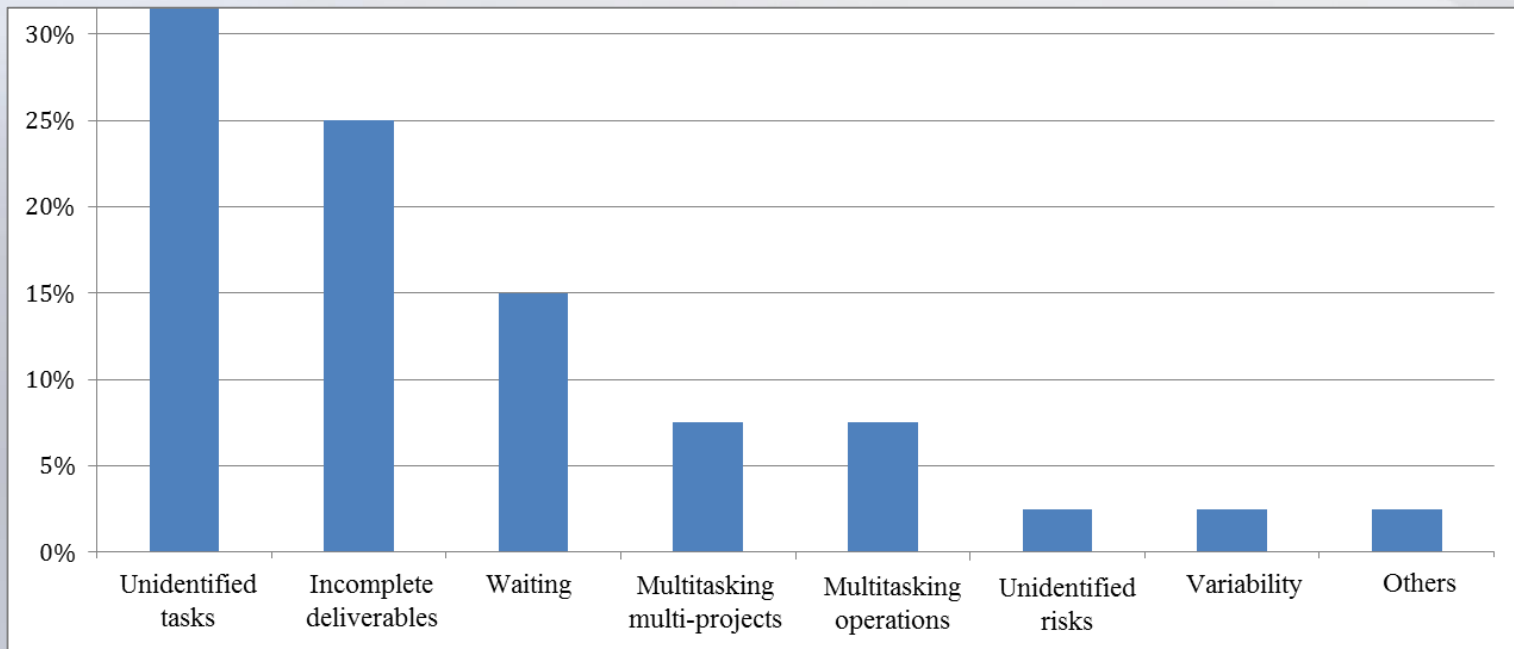
To limit the number of ongoing projects, do not launch projects too early

- Traditionally, people try to level resources between all projects.
- CCPM only considers the capacity constraint (or control point).
- Projects are launched according to the constraint's availability.
- We avoid unnecessary WIP that generate (very) bad multitasking.



Important but not always done: analyse the causes of buffer consumption

- Each time an activity on the Critical Chain takes more time than initially planned, the buffer is consumed.
- It is crucial to understand why the buffer is consumed, in order to start a process on-going improvement.
- Initially the buffers are consumed for the wrong reasons:



The blind spots of Critical Chain

- CCPM is a scheduling and execution system. It does not ensure that the completed project was a success:
 - a bad product, a product that is very difficult to manufacture, etc.
- So needs combining with Lean Engineering etc.
- It is very difficult to apply to external contributors (subcontractors, other departments, ...).
 - See Ian Heptinstall's presentation later today.



It is really just common sense

- How do organize your project of catching a plane?



Conclusion: The Critical Chain can be applied to all kinds of projects

- New Product Development (single project or project portfolio).
- Construction and big engineering projects.
- MRO: Maintenance, Repair and Overhaul.
- Software development (often with Agile)
- Non repetitive manufacturing process.
- General management!
- ...



Thank you for your time

*In the speaker's opinion
there is no viable alternative to
Critical Chain Project Management...*

Questions?