



# 12<sup>th</sup> International Conference of the TOC Practitioners Alliance – TOCPA

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April 26-27, 2014 Moscow, Russia

## Important Issues of CCPM

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27, April 2014





# Oded Cohen

Oded has over 35 years of experience in developing, teaching and implementing TOC methodology, solutions and implementation processes working directly with Dr. Goldratt all over the world. Among the countries to which Oded brings his expertise are the USA, Canada, Japan, India, China, the UK, Poland, Russia, Ukraine, Colombia, Chile, Peru, Turkey and many others.

Oded has authored multiple TOC articles and contributed to numerous TOC books.

Oded is the author of *Ever Improve – A Guide to Managing Production the TOC Way*, published in June 2010. Oded co-authored the book *Deming & Goldratt: The Theory of Constraints and the System of Profound Knowledge – The Decalogue*.

Together with Jelena Fedurko Oded has co-authored the book *Theory of Constraints Fundamentals*.

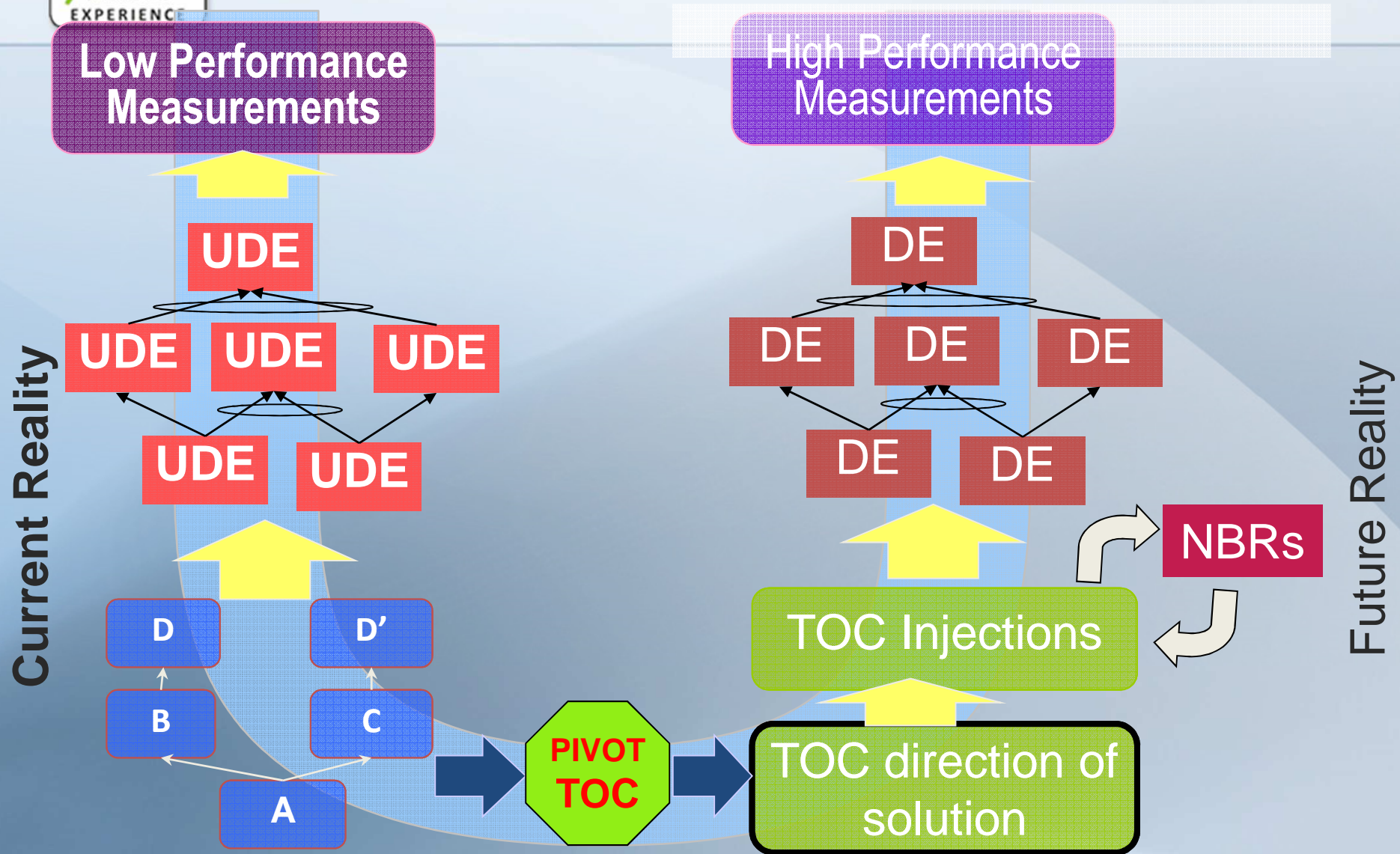
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# TOC Direction of the Solution



# TOC Direction of the Solution

## Use the TOC Pivot to Better Manage the Flow



### Focus-Flow

- Time Constraint
- Time Buffers (CCPM)
- Using Buffers for planning and Controlling the Execution



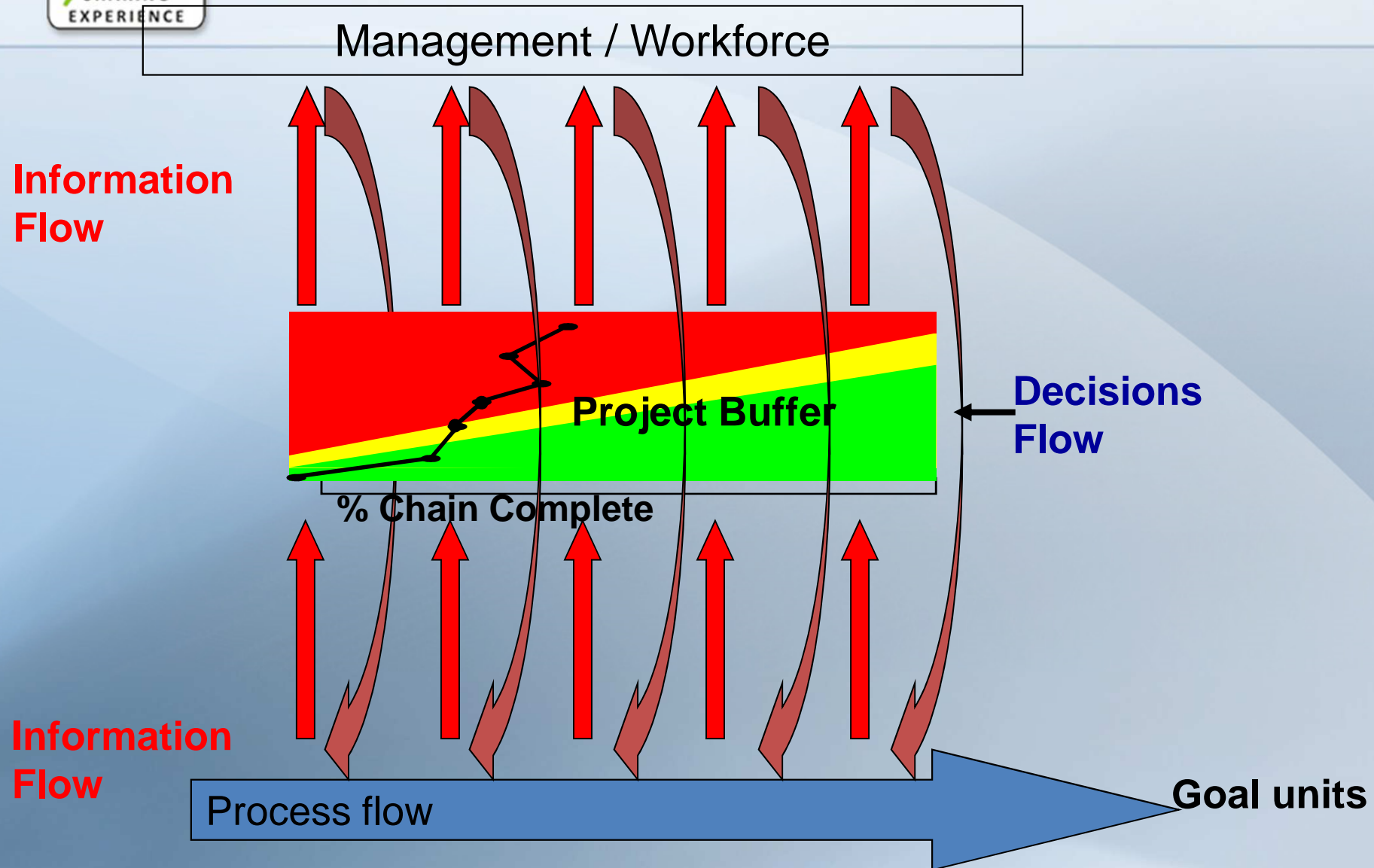
## CCPM –

Critical Chain Project Management:  
The **TIME** constraint of the project is presented through the Critical Chain – the longest chain of dependent activities. Managing the project through the CC is geared to finish the project in a safe and quick way

**TOC direction  
of solution**

Future Reality

# Managing the FLOW in Projects





# Buffer Management For Execution control

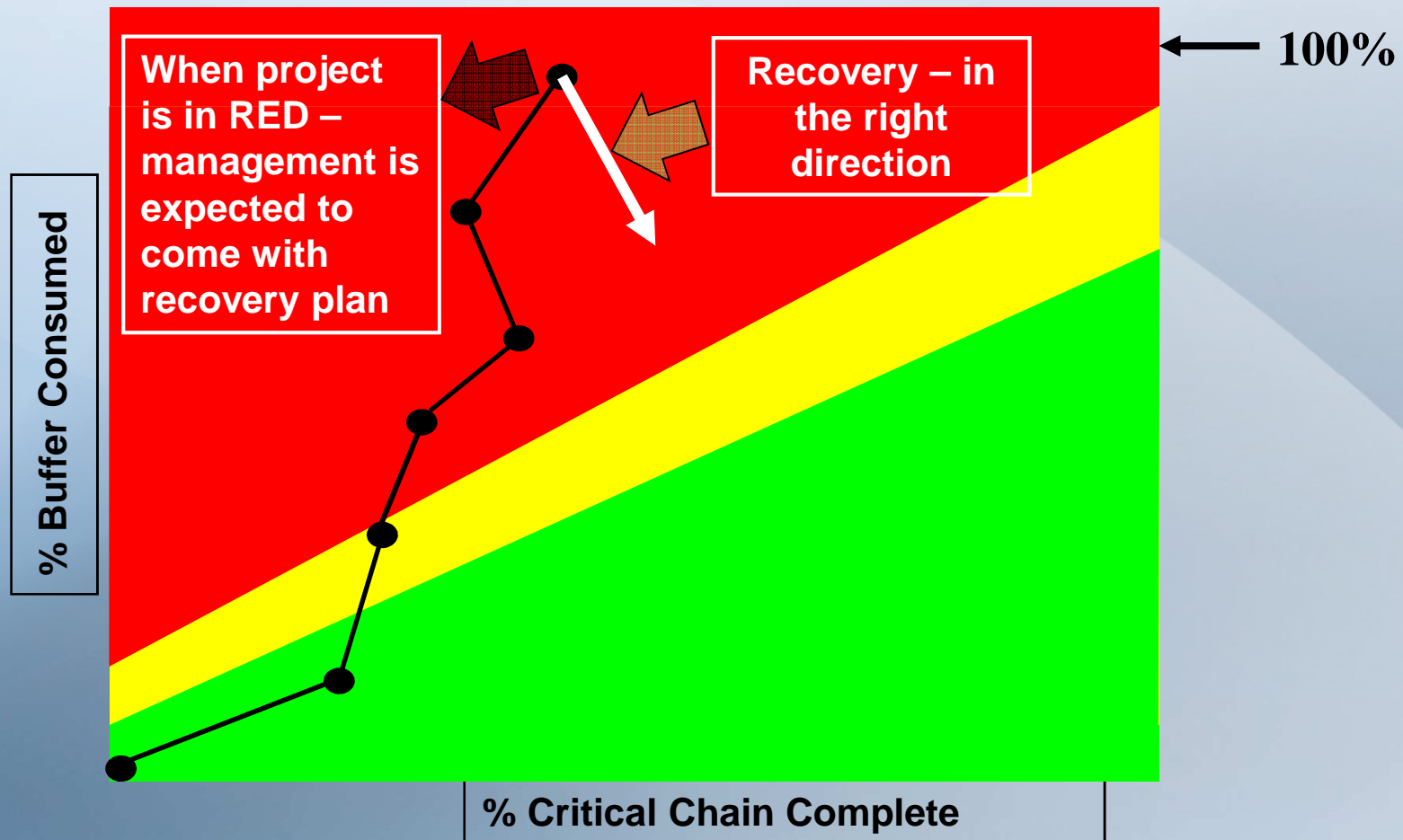


**Buffer Management – a mechanism that informs management about the true situation with the flow through the continues update of the buffer status as compared with the plan.**

**During the execution Buffers are used for:**

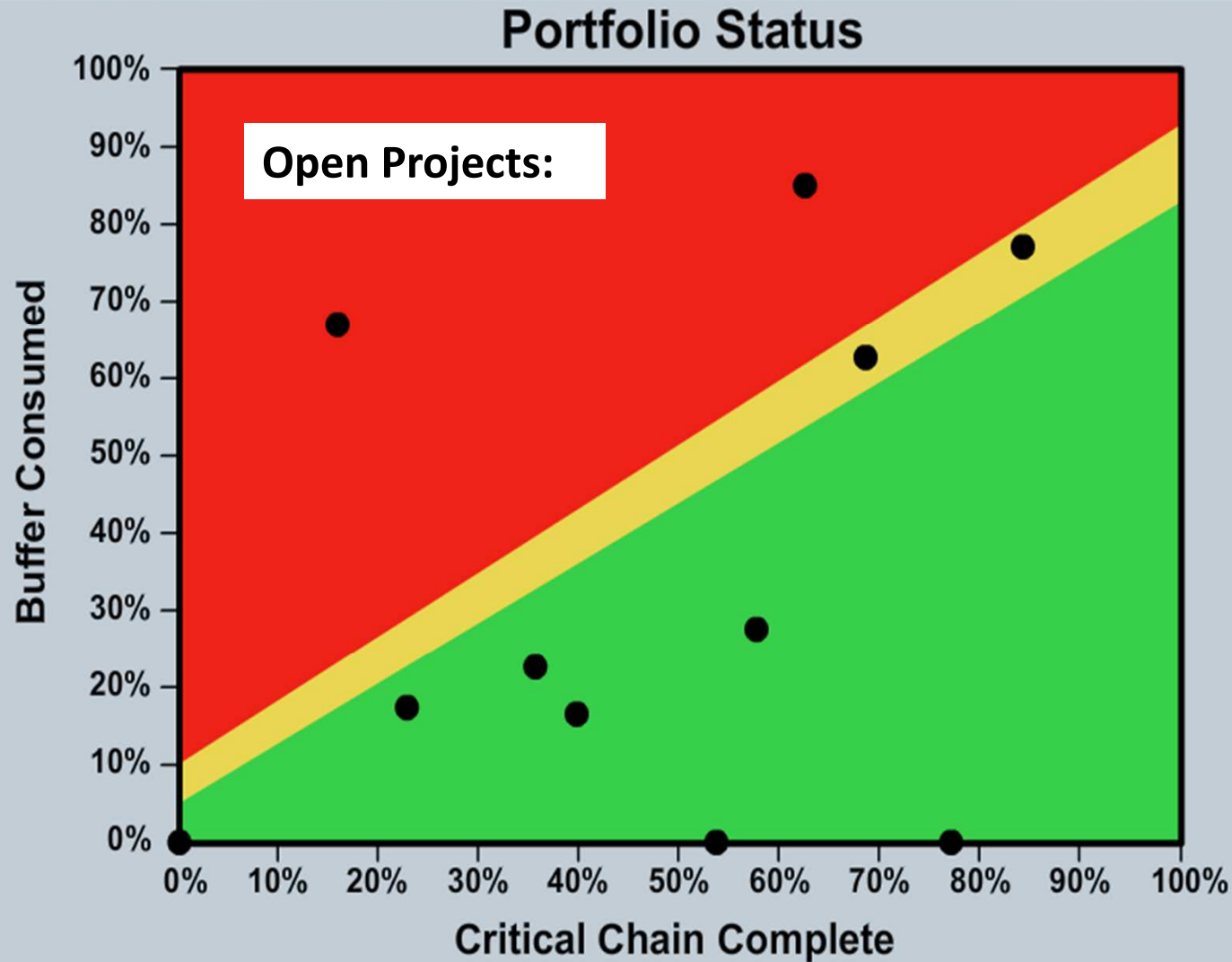
- 1. Priorities for assigning resources to perform tasks.**
- 2. Prompting recovery actions to ensure enough buffers for the rest of the flow.**
- 3. Identifying reoccurring problems in the flow for POOG.I**
- 4. Buffer management is always oriented to the future.**

# Buffer penetration Report

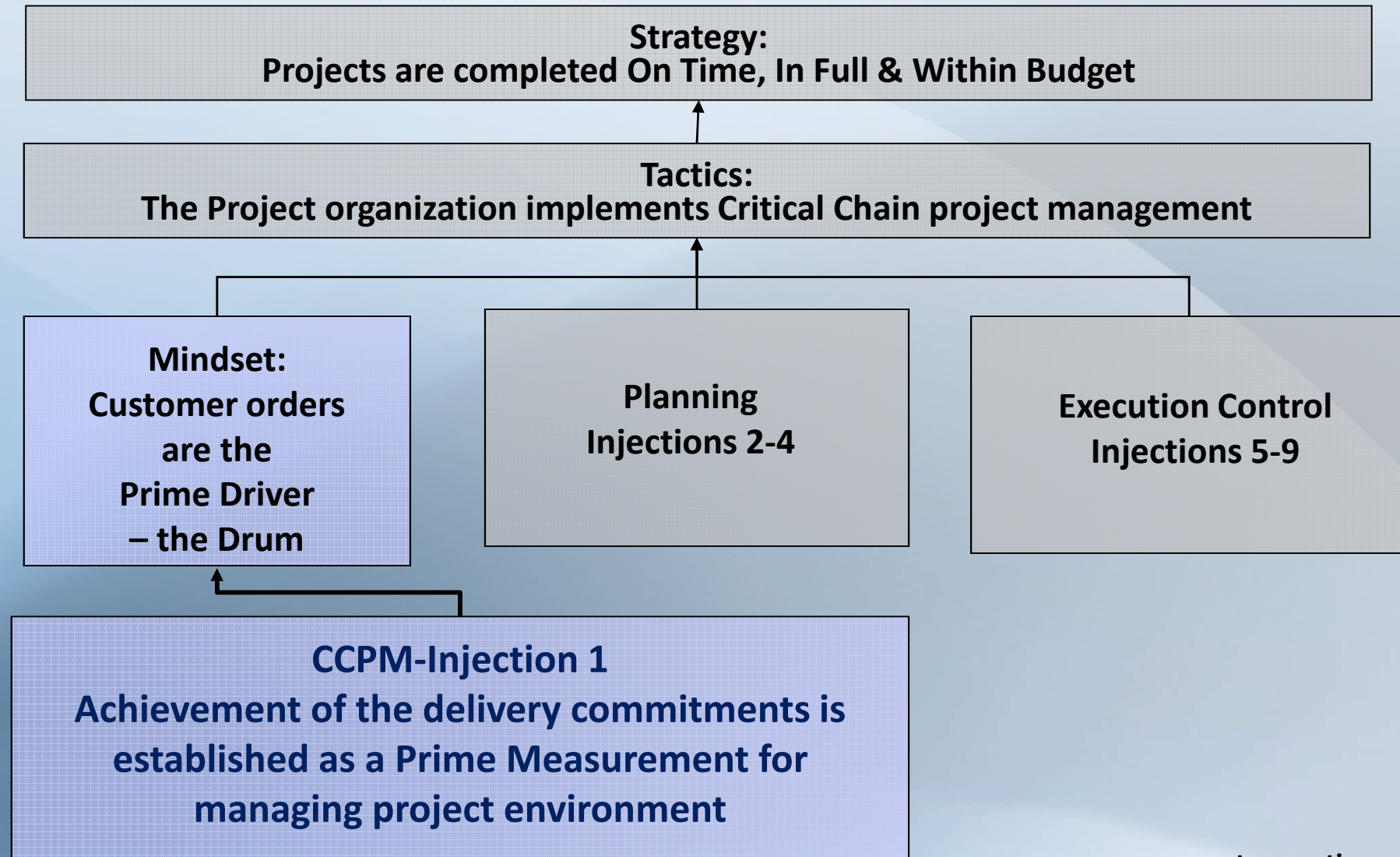




# Portfolio Status Report



# TOC Solution for Single Project Management



# TOC Solution for Single Project Management – Planning

**Tactics:**  
The Project organization implements Critical Chain project management

**Mindset:**  
Customer orders  
are the  
Prime Driver  
– the Drum

**Planning**  
Injections 2-4

**Execution**  
Control  
Injections 5-9

## Project Plan

CCPM- Injection 2

Project Planning Diagrams are in place  
with tasks resourced and estimated for  
duration (while estimates of durations  
are “challenging but achievable”)

## Critical Chain

CCPM-Injection 3

Critical Chain is  
determined through  
resolving resource  
contention

## Buffers

CCPM -Injection 4

Buffers are  
inserted in  
strategic points



# Managing the Project Planning The TOC way

## Criteria for a Good Project Plan

1. **Providing financial benefit** – by the successful completion of the project on time, within budget and according to the promised specification – the project generates Throughput for the contractor of the project.

Injection 1

2. **Realistic** – the plan does not contain conditions that are known to be unrealistic (such as resource loading over 100% of available capacity).

Injectons 2-3

3. **Immunized** against disruptions (Murphy and uncertainty).

Injection 4





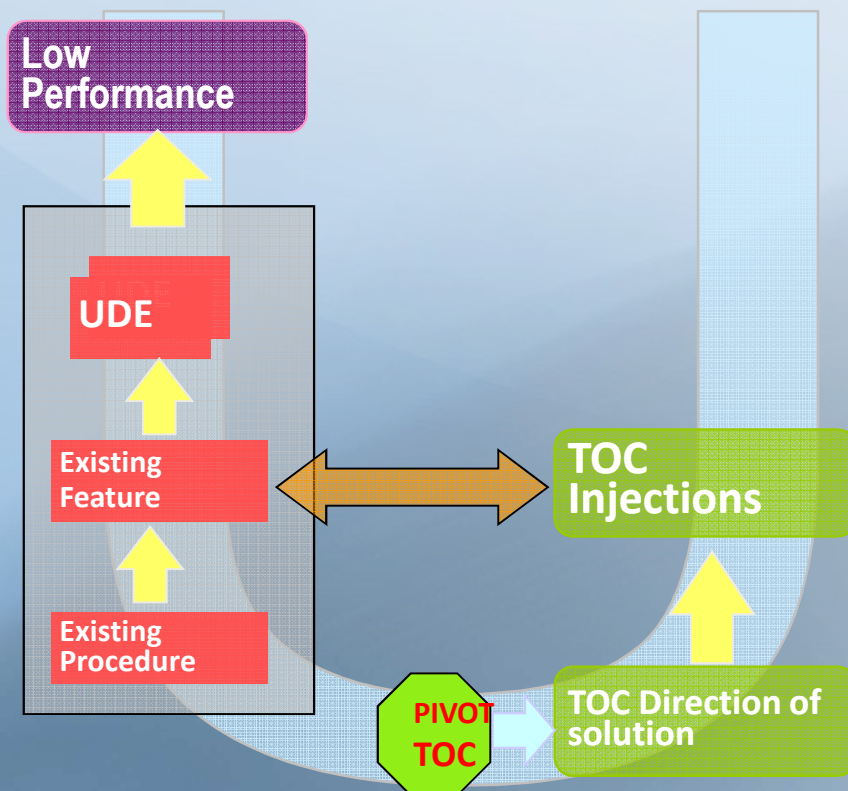
# Managing the Project Planning The TOC way



## The quality of the Project Plan:

- The better the plan the less surprises experienced during the execution phase.
- Any inputs, reservations or conflicting views that are critical for the successful completion of the project have more chance to be surfaced and sorted out prior to the start of the project.
- The project manager takes a leading role in ascertaining all critical input and incorporating it in the plan.

Planning Injections are NEW features of project management



## Injection 2 – Project Diagrams

**New specifications**

Existing project plans are subject to rigorous logical checking and ambitious time estimations.

## Injection 3 – Critical Chain

**New concept**

Replacing critical path of the traditional project management with Critical Chain removing resource contention.

## Injection 4 – Buffers

**New concept**

Conscious and open provision for additional time to protect from uncertainty.

# Managing Project Execution The TOC way

## Criteria for a Good Execution Control

1. **Priority** – the process of assigning resources should be linked to the overall importance of the project and its own progress.

Injectors 5-6

2. **Recovery** – the execution processes direct management in taking actions that bring projects to be back on course for on-time completion.

Injection 7

3. **POOGI** - the system provides statistics to enable management to continually learn and improve planning and execution control.

Injectors 8-9



# TOC Solution for Single Project Management – Execution

**Tactics:**

The Project organization implements Critical Chain project management

**Mindset:**  
Customer orders  
are – the Drum  
Injection 1

**Planning**  
Injections 2-4

**Execution Control**  
Injections 5-9

## Report & priority

CCPM-Injection 5  
Tasks are  
performed  
according to the  
status of their  
corresponding  
buffers through  
using Buffer  
Management

## Look ahead

CCPM-  
Injection 6  
Resource  
availability is  
monitored in  
anticipation  
of a new  
planned task

## Recovery

CCPM-  
Injection 7  
BM for  
recovery  
actions is  
in place

## POOGI

CCPM-  
Injection 8  
Buffer  
penetration  
reasons are  
reviewed  
periodically  
for POOGI

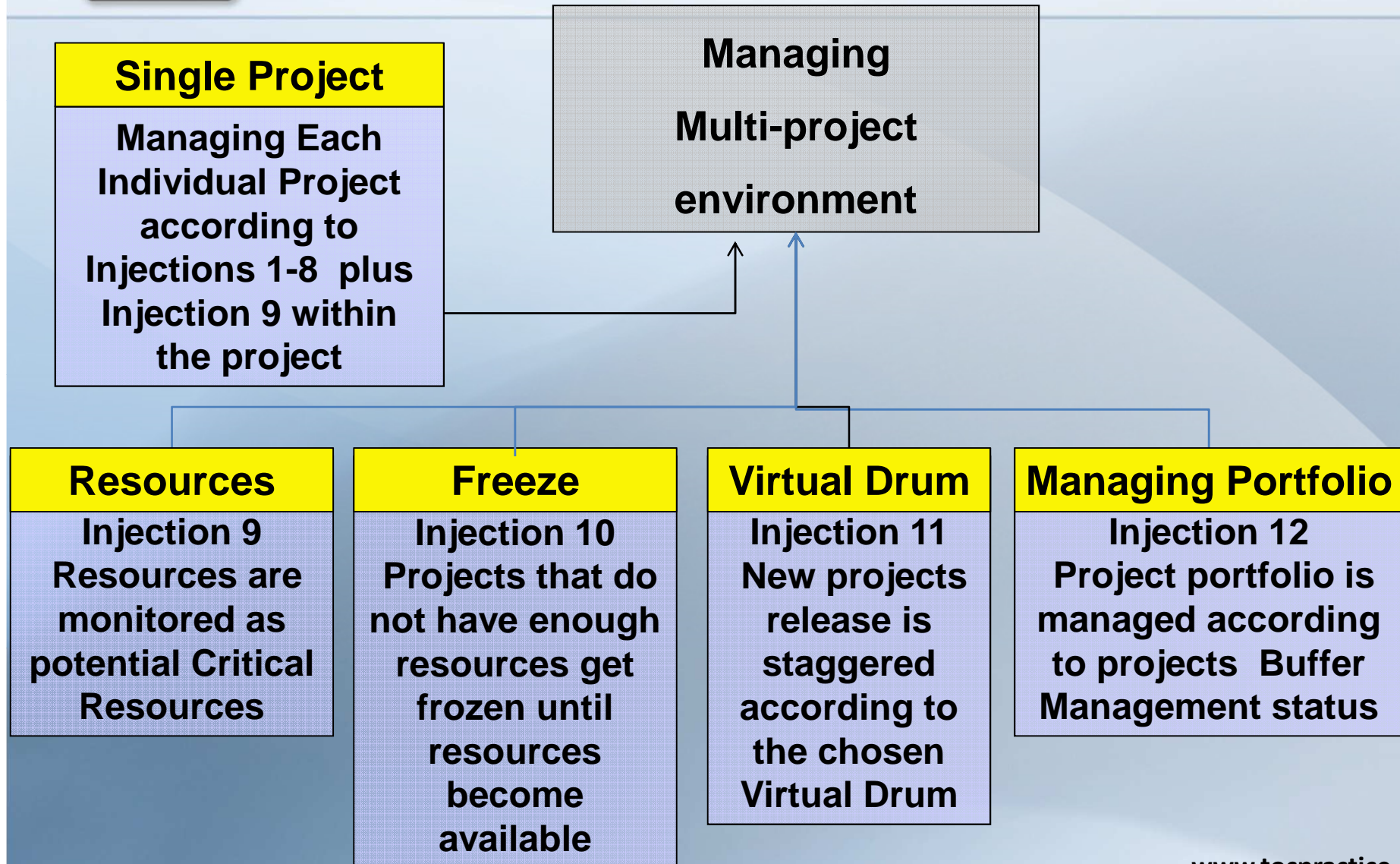
## Critical resources

CCPM-  
Injection 9  
Resources  
are  
monitored  
as potential  
Critical  
Resources



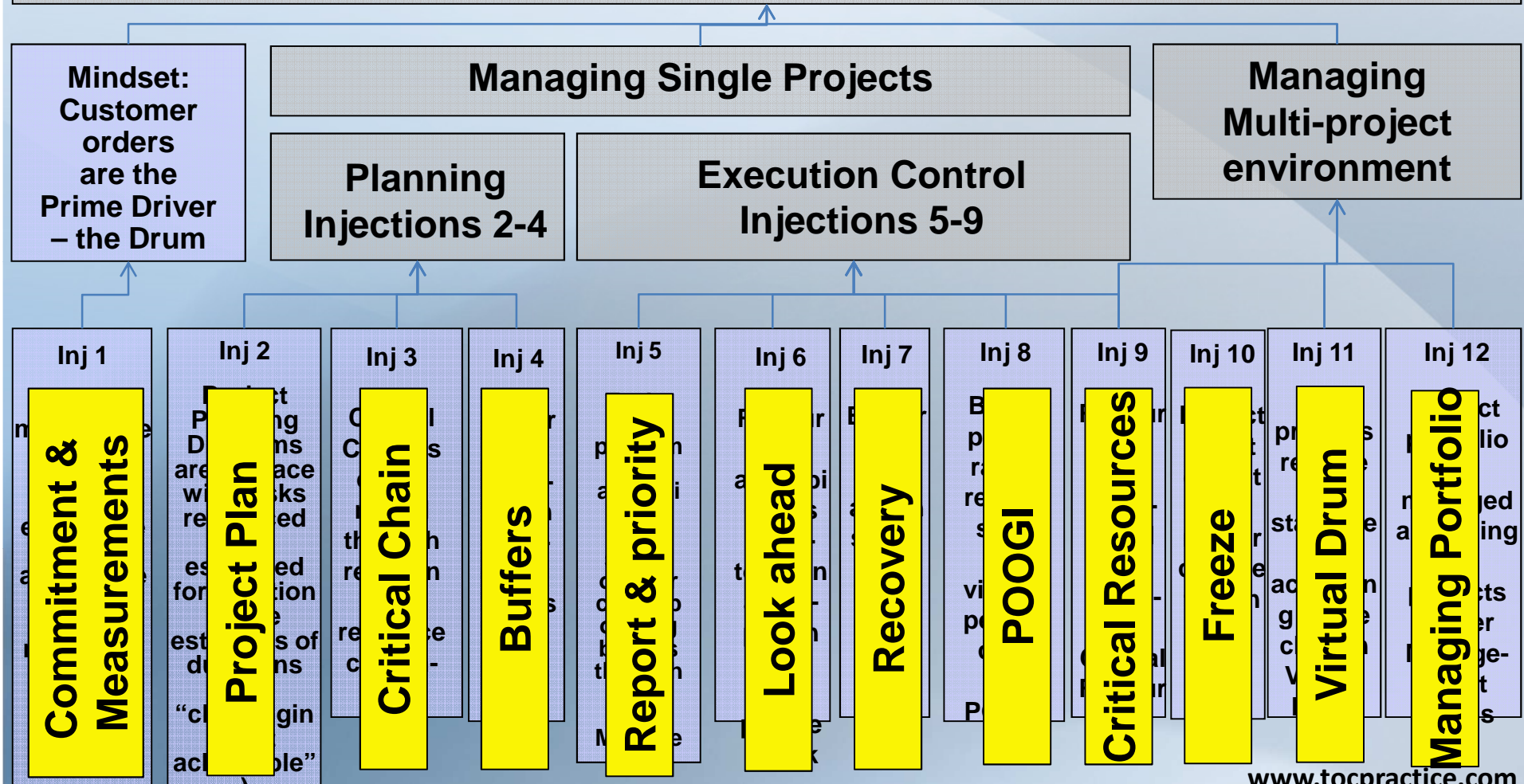
# ***Expanding CCPM to Managing Multi-Project Environment***

# TOC Solution for Multi Project Management



**Strategy:** The Projects are completed On Time, In Full & Within Budget

**Tactics:** The Project organization implements Critical Chain project management for single and multi-project environments



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