"Recent Advances in Public Procurement"

4th March 2024, SCOPE Complex, New Delhi

Anil Shipley

What are the common complaints in spite of different environments?

What is a project: Building Construction, ERP Implementation, Construction of a public utility, Product development, Marketing launch etc

- ✓   Original due dates are not met.
- ✓   There are budget over runs.
- ✓   The original content is not delivered.
- ✓   There are too many changes.
- ✓   Resources not available when needed even when they were promised earlier.
- ✓   Project priorities are always changing.
- ✓   Too much of re-work, specifications not correct.
- ✓   Everyone is stressed and over worked.

Is this a complete list?

If the problems are the same in projects does that mean the root cause is also the same? – **Not necessarily.**

From this vast list of issue (UDE) how do I find the **root cause**?

Conflict : Generic

Original commitment of due date, at a Budget & Original content.

Assumptions:
1. Original commitment was realistic.
2. Must start early to finish in time.

Do whatever it takes to meet the original commitment of due date.

Compensate for early mis-estimates and mis-considerations

Assumptions:
1. Current safety not big Enough to cover all glitches.
2. Local action has direct and proportional impact on whole project

A

Meet original commitment.

Don't jeopardise the original commitment of budget and content.

Don't Compensate for early mis-estimates and mis-considerations

Assumptions : Original estimations and considerations were correct.

Challenging the paradigms

- ✓ Every local improvement is an improvement for the system as a whole.
- ✓ Every problem needs to be addressed directly and independently to improve the system as a whole.
- ✓ In order for one part in the system to win, another must lose.

The Conflict
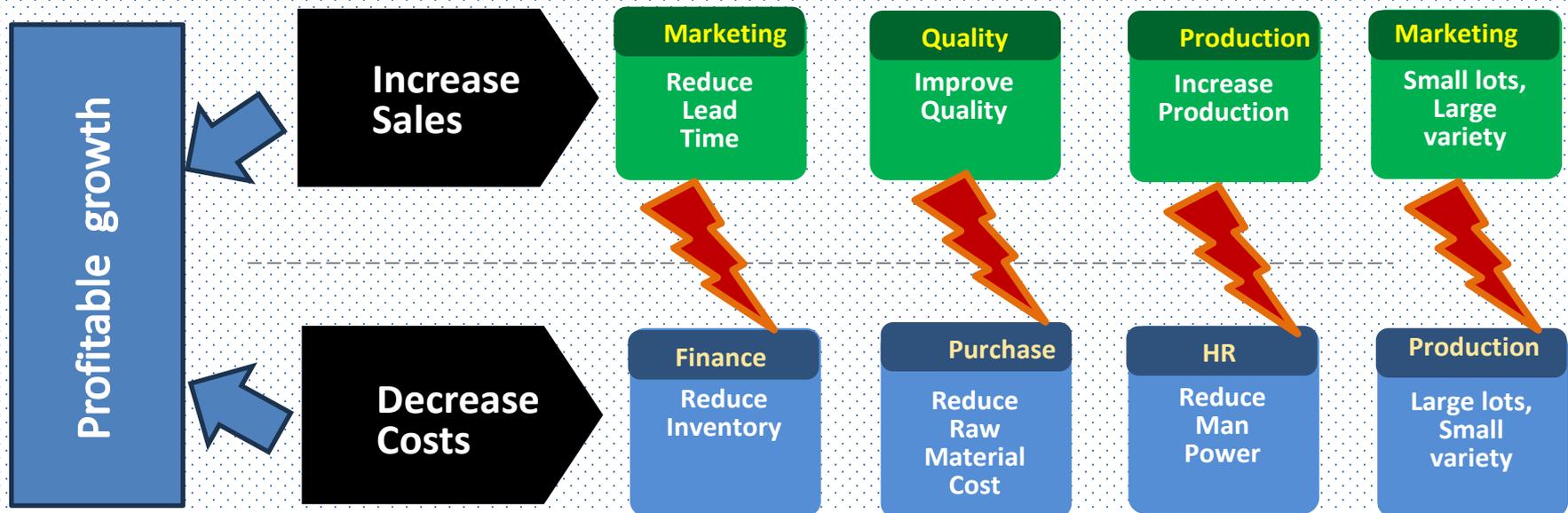
Ways to look at system output

System output

| TASK 01 100 u/d | TASK 04 135 u/d | TASK 02 85 u/d | TASK 03 300 u/d | TASK 05 150 u/d |

Serial vs Parallel working (4 ships, 4 men, 4 man-days to unload)

Days	Ship 1	Ship 2	Ship 3	Ship 4	Ship 1	Ship 2	Ship 3	Ship 4
D1	25%	25%	25%	25%	100%			
D2	25%	25%	25%	25%		100%		
D3	25%	25%	25%	25%			100%	
D4	25%	25%	25%	25%				100%

SYNCHRONIZING THE FLOW

DEPLOYING CCPM PROCESS: Incorporate both, "Structural dependency"& "Resource dependency"
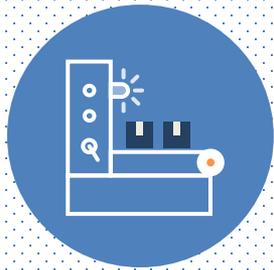
Reducing Bad-multitasking (WIP CONTROL)
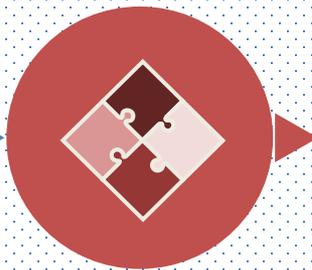
FULL KIT OF PREPARED-NESS

MATERIAL FLOW CONTROL
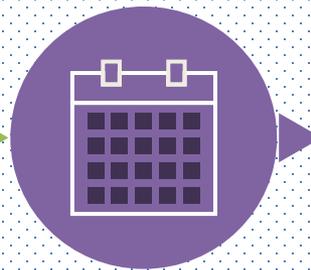
PROJECT SCHEDULING

MITIGATING CLIENT DISRUPTIONS

POOGI

LIFE HISTORY OF EPC COMPANIES
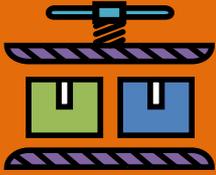
Controlling the number of open work packets will prevent the bad-multitasking.
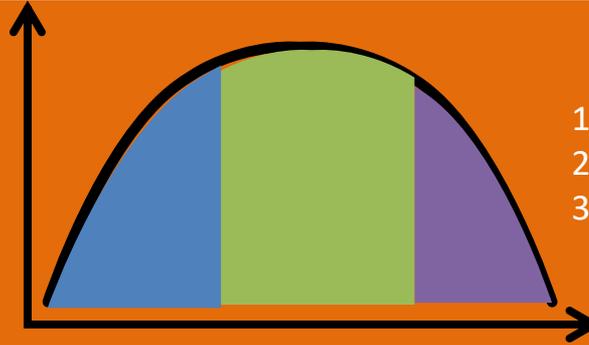
1. Starvation.
2. Open tasks
3. Bad multitasking

NO OF PROJECTS/VALUE OF PROJECTS

CUMULATIVE CURVE OF NEW PROJECTS

WIP OF PROJECTS

WIP OF PROJECTS

WIP OF PROJECTS

WIP OF PROJECTS

CUMULATIVE CURVE OF CLOSED PROJECTS

TIME PERIOD
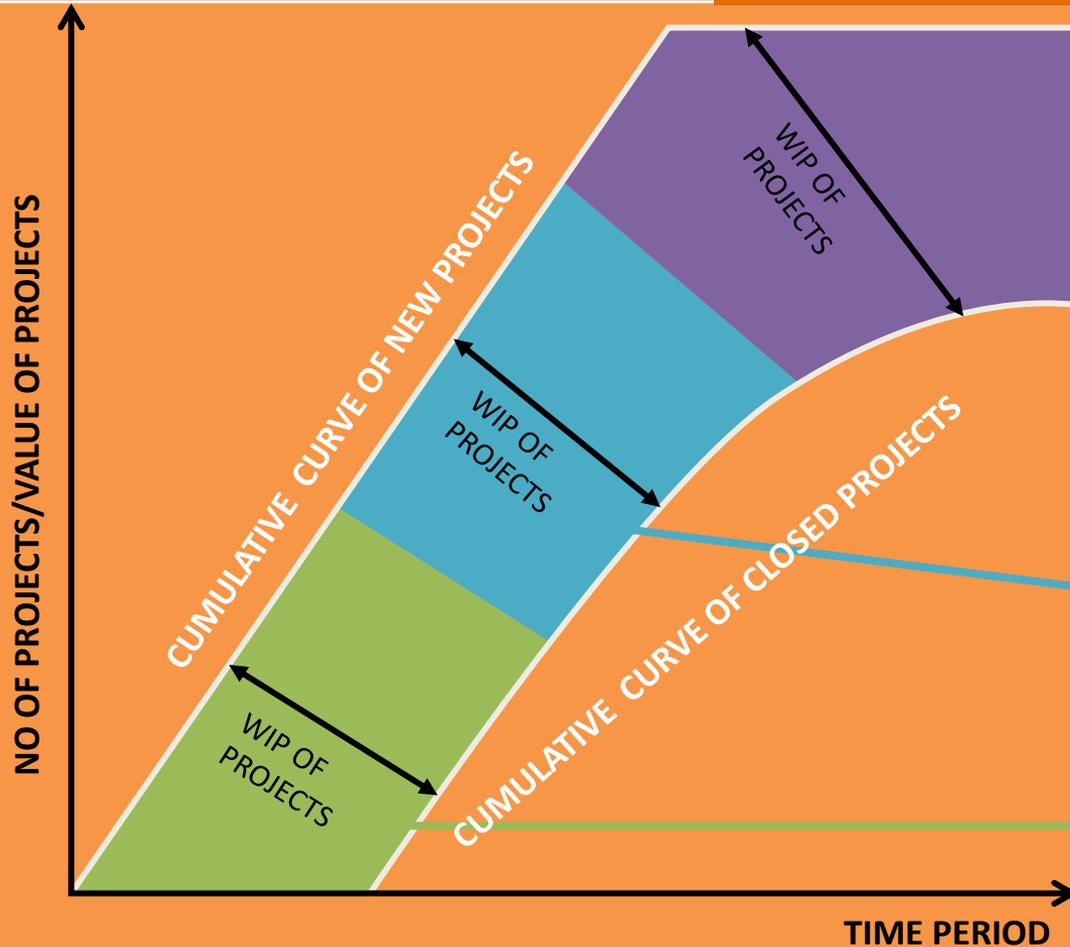
Towards Closure
Receivables spiral out of control. Complaints from all sites. Pressure from board to stop business intake and suffer financial losses and focus on only closing old sites. Many jobs lost.

Zone of Instability
Site closures slow down, many open sites. Primarily due to de-synchronized supplies, too much expediting for missing parts leading to further de-synchronization in other projects, cash flow issues and rising receivables.

Zone of Stability
Rate of projects closure matches rate of opening of new projects. Receivables under control, stable business.

FULL - KIT
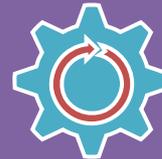
The current pressure often causes sub-projects/tasks to be in execution without complete materials/approvals leading to further interruptions rework and bad multitasking.

Strict gating rules are introduced for every task module/sub projects.

MATERIAL FULL KIT

SURVEYS

OTHER APPROVALS
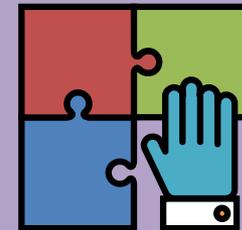
A different management layer is kept aside for making preparatory ready!

MATERIAL MANAGEMENT
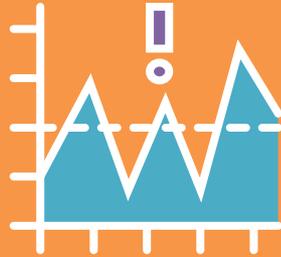
The level of scope uncertainty is very high in the project. The material consumption can be very different from what has been planned at site.

At times material supplied may not be immediately required leading to "stealing of cash"

How do you measure performance of Material management? .
Delivery of material only in full kit – Erectable sets. OTIF.
Material supply as per consumption and not as per forecast– measure Availability

CONVENTIONAL MODE : ESTIMATE AND COMMITMENT

When estimates are converted into commitments in an uncertain environment , we get buffers in return. (Murphy's Law)

When do we start work. (Student syndrome).

Positives are never passed on but negatives are. (Parkinson's Law)

Despite the buffers, if most projects are delayed, it means safety is wasted in execution

SAFETY TIME		SAFETY TIME		SAFETY TIME
TASK 01	→	TASK 02	→	TASK 03
DEADLINE		DEADLINE		DEADLINE

Why conventional solution may not work:

- A project plan with intermediate milestone/deadlines
- And seek commitments around the milestones
- Check variance around the deadlines to get the big picture

➢ Clean handover processes are likely to be diluted

➢ Deadline based priority will conflict with sequential common priority system

WASTAGES OF SCHEDULING: **DE-SYNCHRONIZATION**

Expert 1
- My calendar is not free

Expert 2
- My calendar is not free

Expert 3
- My calendar is not free

- Cross functional issues wait for free calendars to get resolved
- When dates are shifting, pre-planning tasks goes haywire

- Predefined Frequency of meetings across layers of management- **obstacle removal**
  - Daily /Weekly Management
  - Experts view the conflict simultaneously and understand each other's view on real time basis

- Predefined work bundles between resource groups for handovers – no fast tracking
- Start only when full kit is available.

Points I plan to discuss.

- ✓ What is the original promise of any project and why it usually fails.
- ✓ What happens in a multi project environment.
- ✓ What conflicts the managers face.
- ✓ What is the problem we are trying to solve?
- ✓ Is there an agreement on the problem itself?
- ✓ Can doing the same thing more efficiently will solve the problem.
- ✓ Is there a problem of capacity or band width?
- ✓ How is our performance measured?
- ✓ Can there be a conflict between departmental target and target of the project as a whole?
- ✓ What can be the direction of solution.