

” Unveiling the inherent simplicity of a complex multi project environment, a structural and operational challenge”

[Every improvement results from a change, but every change doesn't...]



MULTI-PROJECT MANAGEMENT

What's the problem?

Some important facts:

80% of all projects are late, over budget and under content!!!!!!!!!!

Lateness is up to 200%!!!!!!

(Standish Group and others)

My claim: 2 Success Keys



S o l i d a r n o s ć

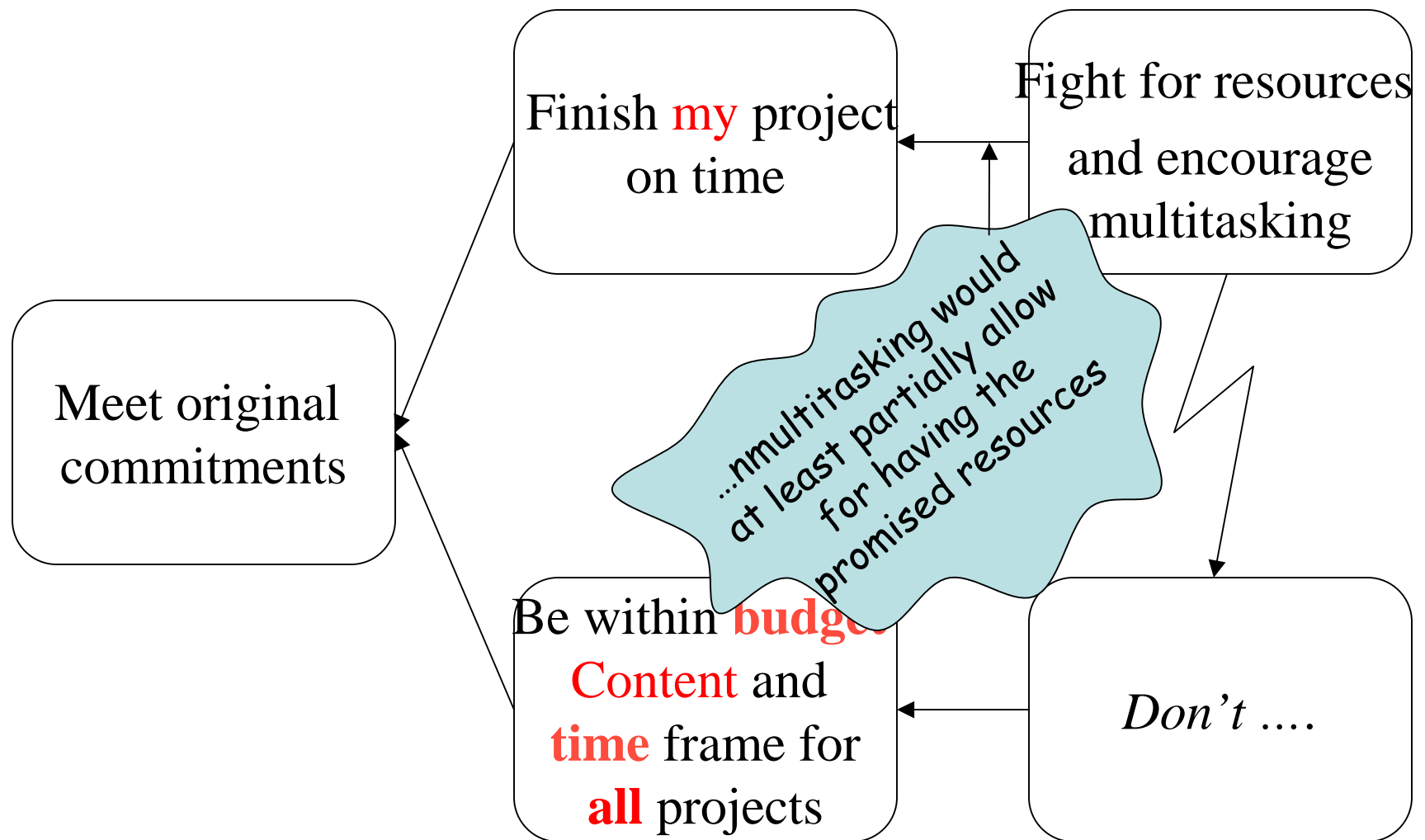
г л а с н о с т ь

Usual complaints



1. **Usually due dates are not met**
2. There is too much change
3. **Very often, resources are not available when needed (even when promised)**
4. Necessary things are not available on time (infos, materials, designs, authorizations...)
5. We have to fight for priorities
6. **We are overrunning budgets**
7. There is too much re-work

Very often, resources are not available when needed (even when promised)

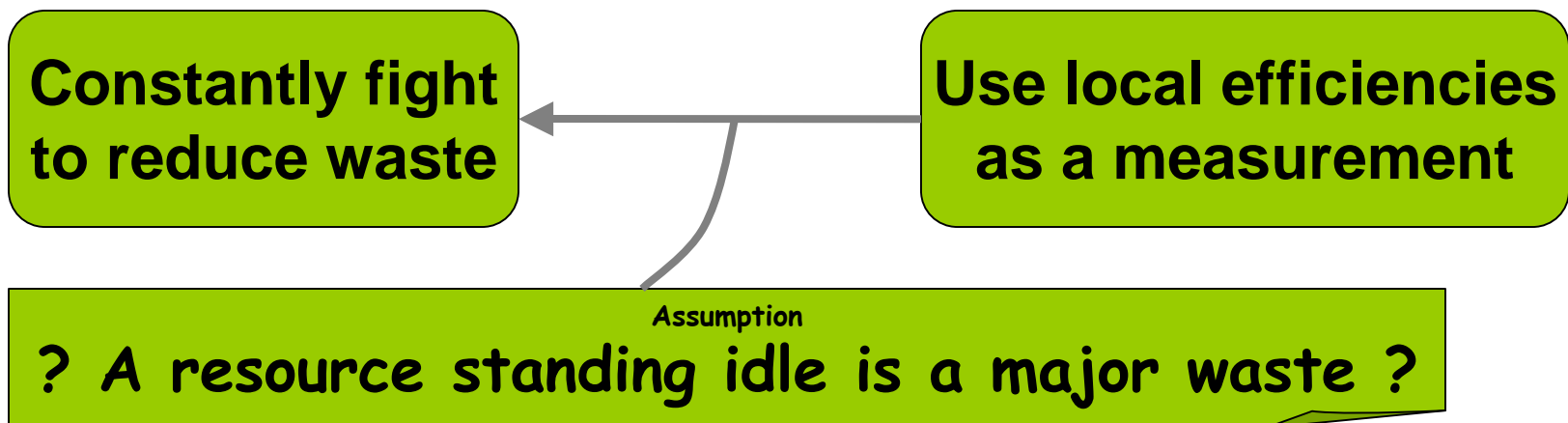


The local optima paradigm in Operational Management



A typical example.

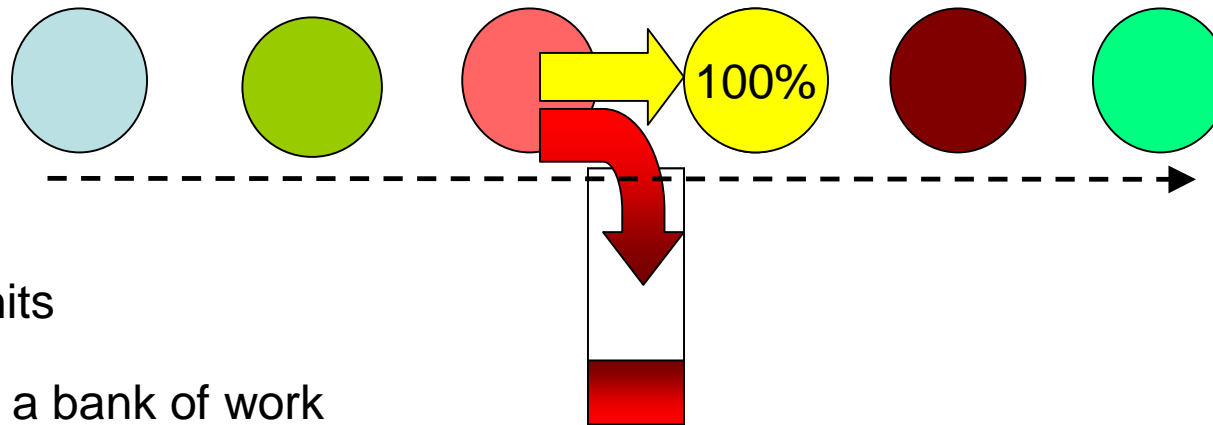
The basic assumption underlying the current environment induces a particular management's behaviour



If this assumption is wrong, than it is beneficial to take aggressive actions to stop resources from time to time



A resource standing idle is a major waste?



Murphy hits

We need a bank of work

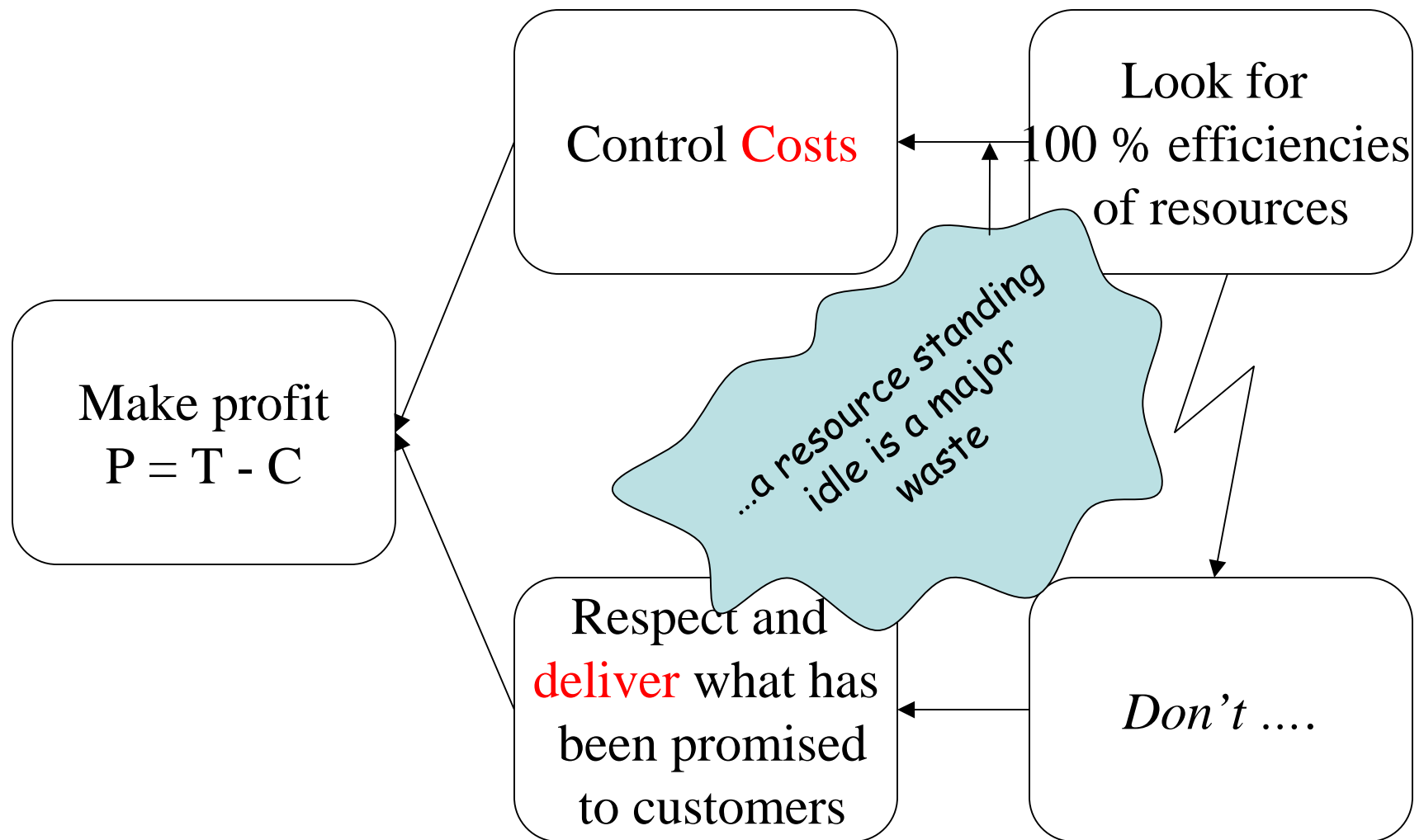
Yellow lives on the bank

When Greent starts up the upstream resources must satisfy 2 consumers:
the Yellow AND the bank!!!

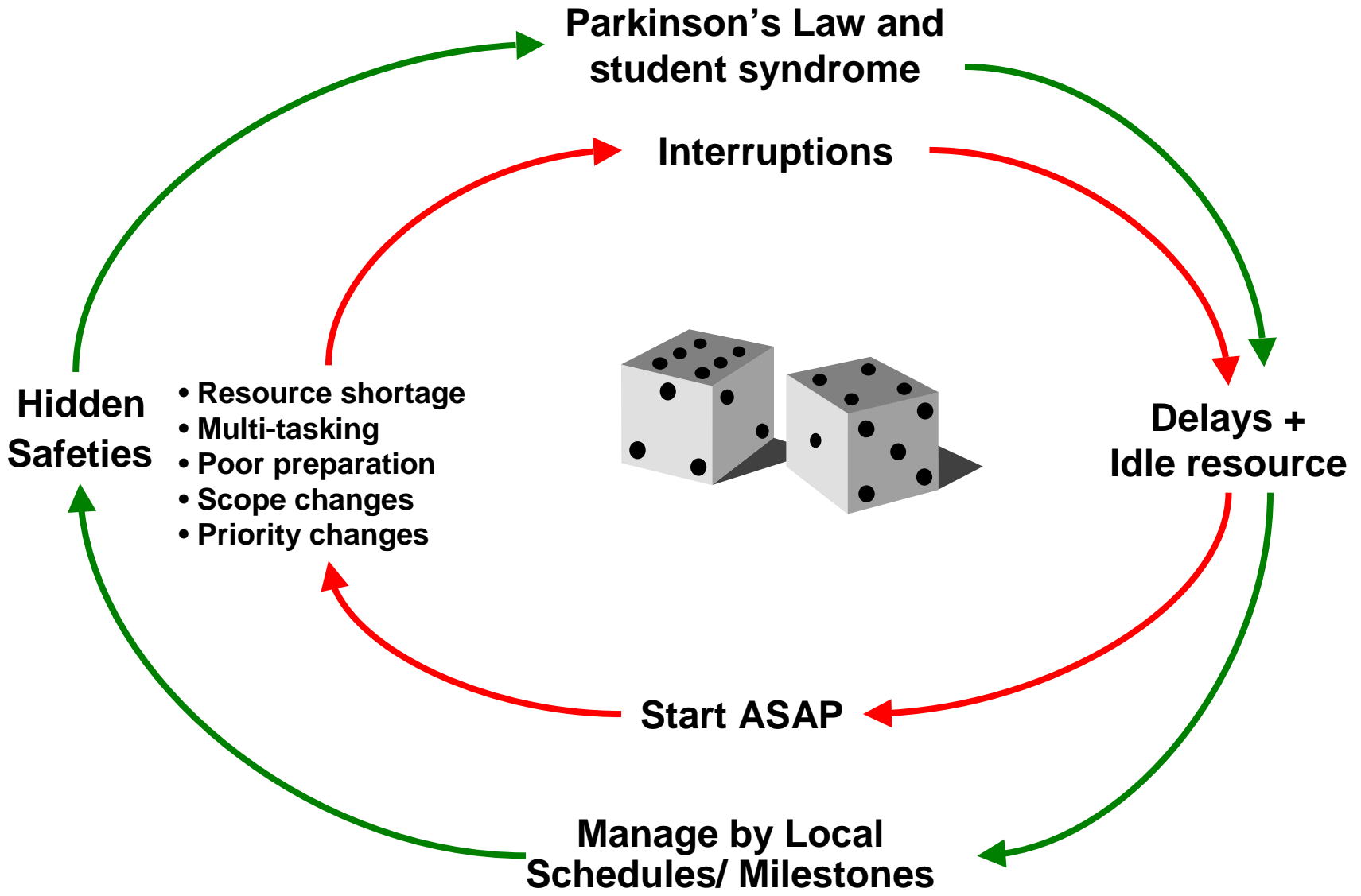
The upstream resources must have PROTECTIVE capacity

There is NO WAY to always run all resources at 100%

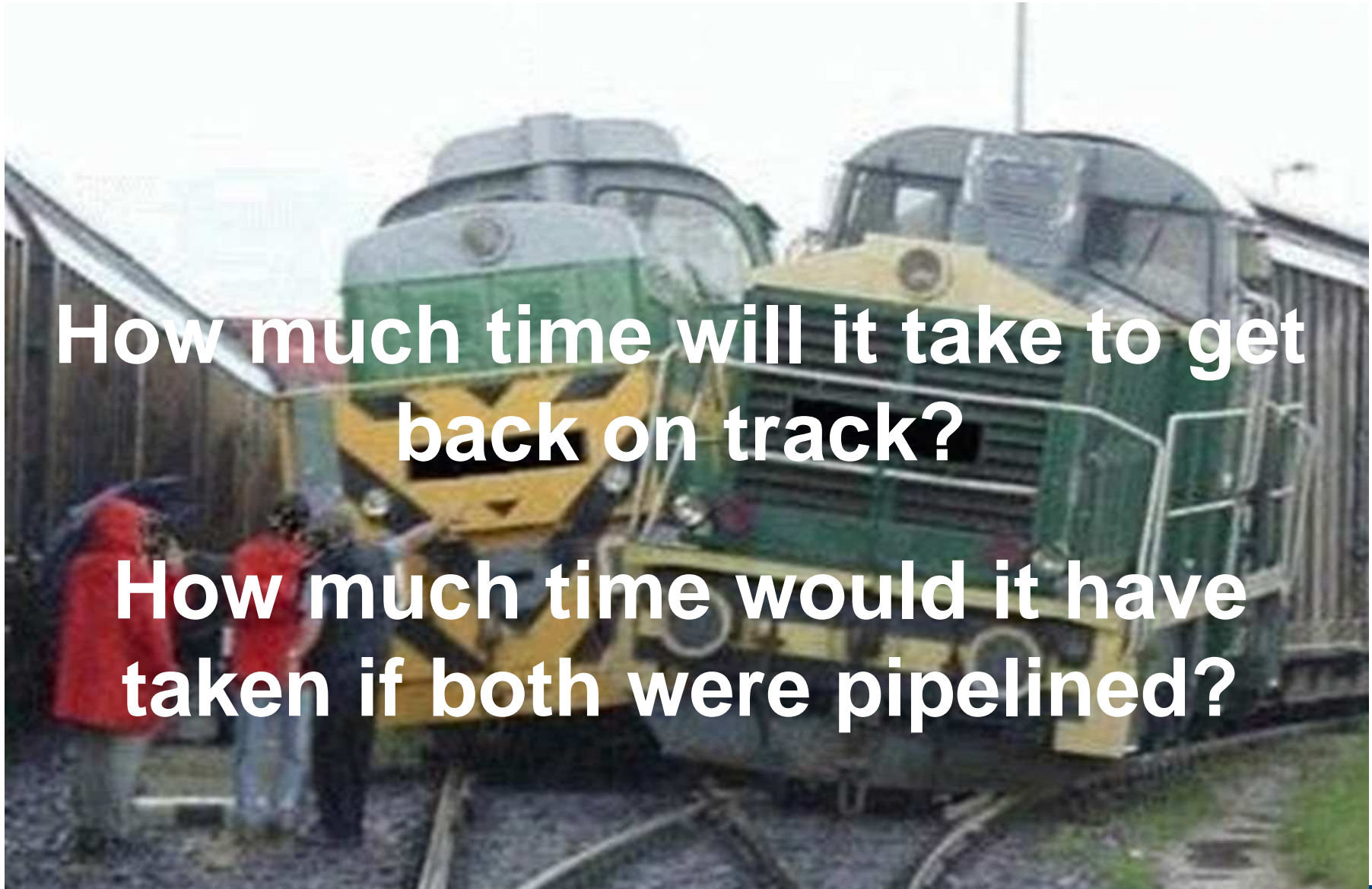
We always overrun our budgets



The Multi-project vicious circle



What about releasing everything asap



How much time will it take to get back on track?

How much time would it have taken if both were pipelined?

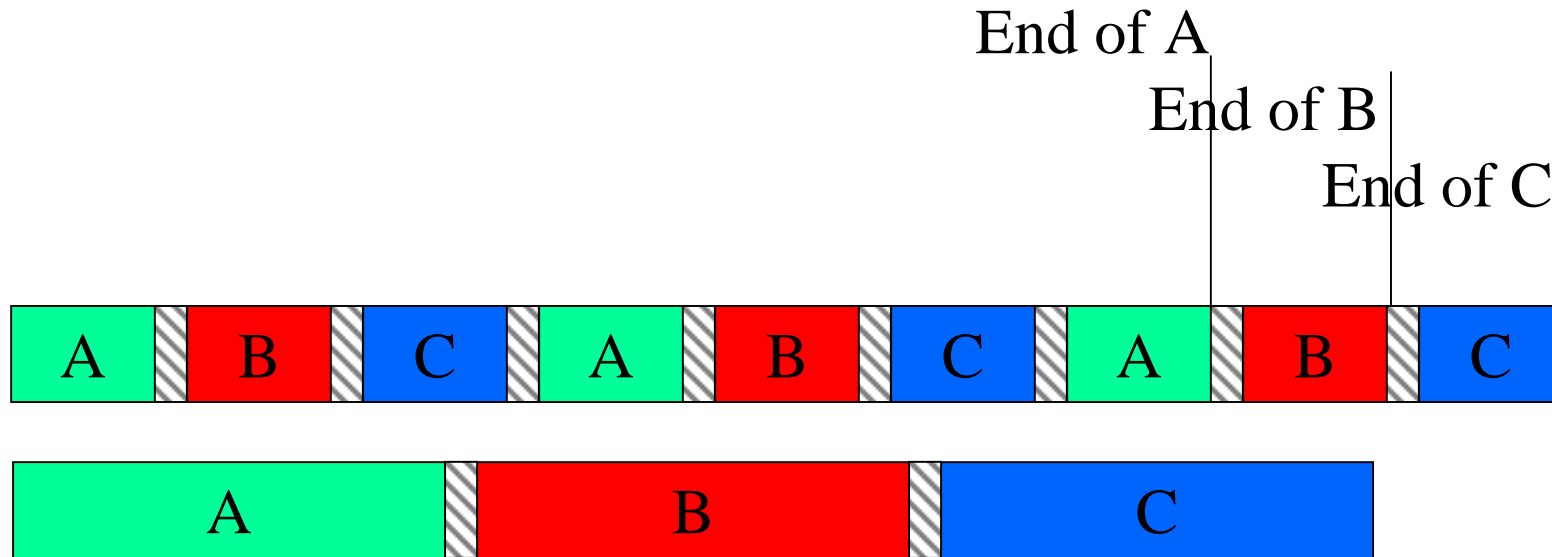
HIGH WIP VS. LOW WIP

LAUNCH WHAT YOUR DRUM IS REQUESTING, NOTHING MORE, NOTHING LESS



Bad Multi-Tasking

Many suffer, nobody gains

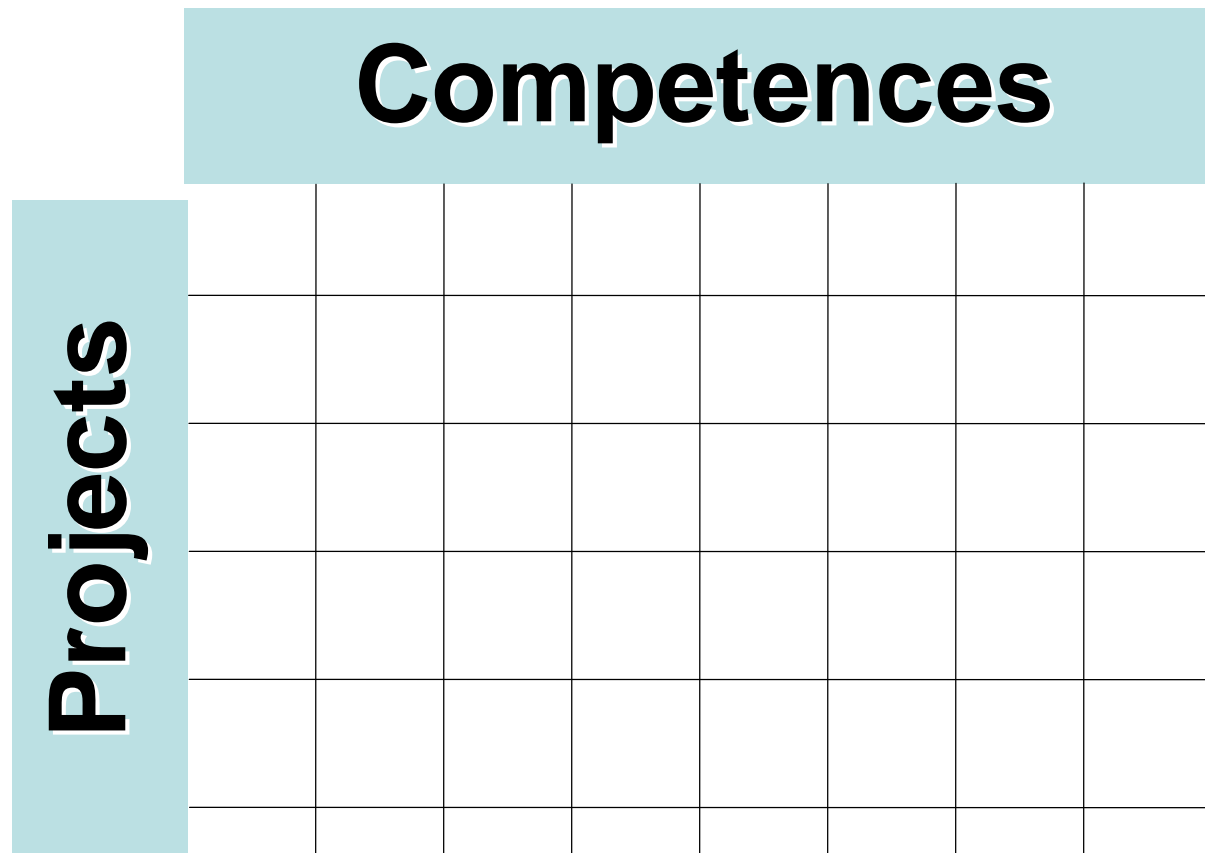


But even worse...

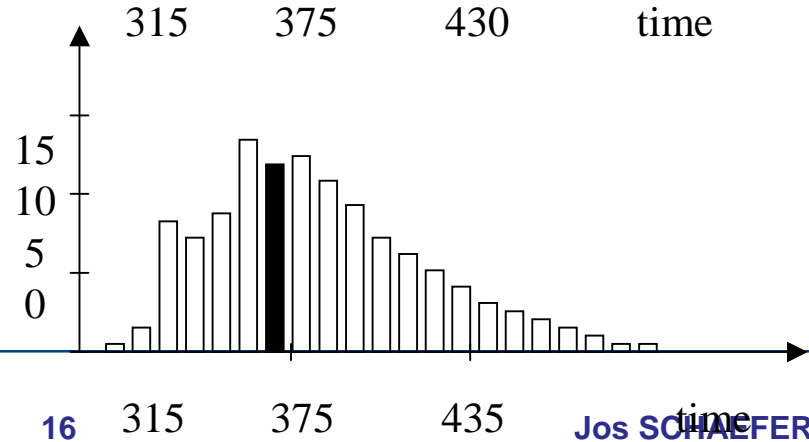
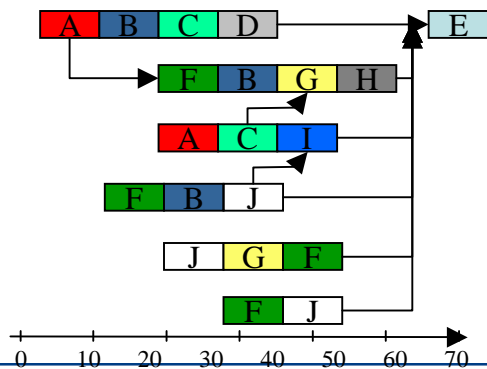
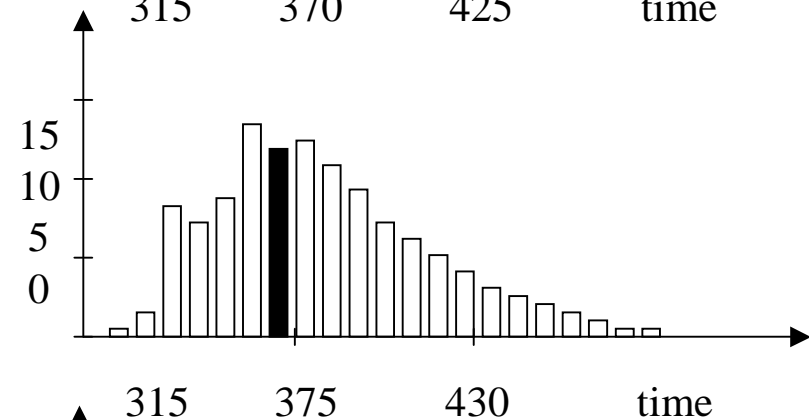
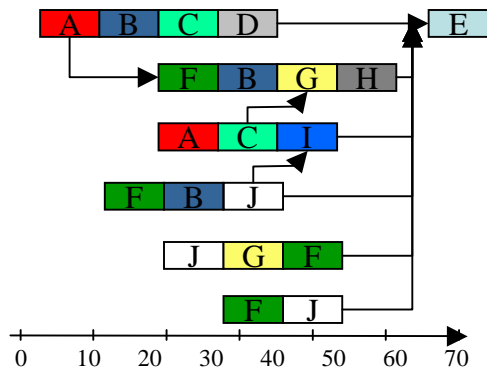
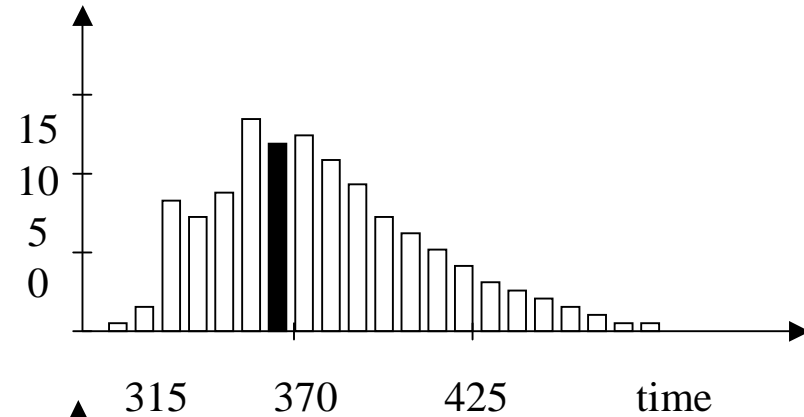
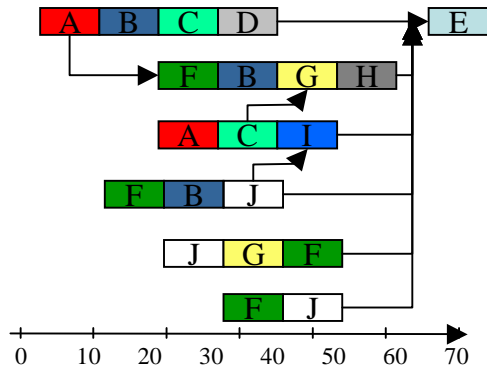
Do you know that it takes you up to
4 times longer when multitasking
compared to pipelining?

A Structural challenge

S o l i d a r n o s ć : Abandon local optima

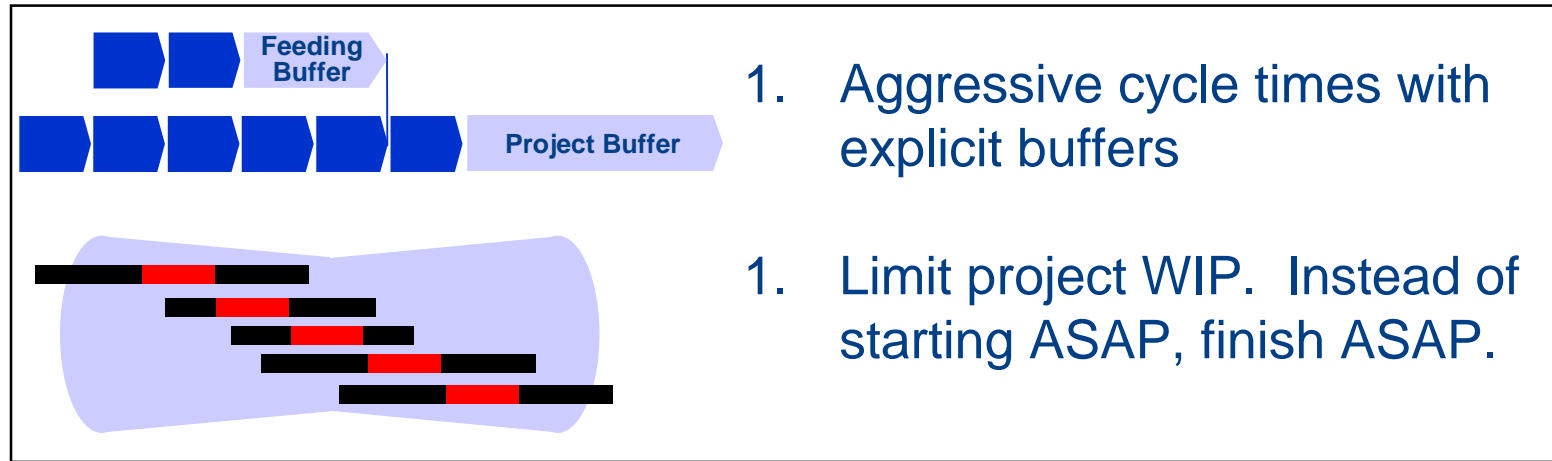


The MPE statistics

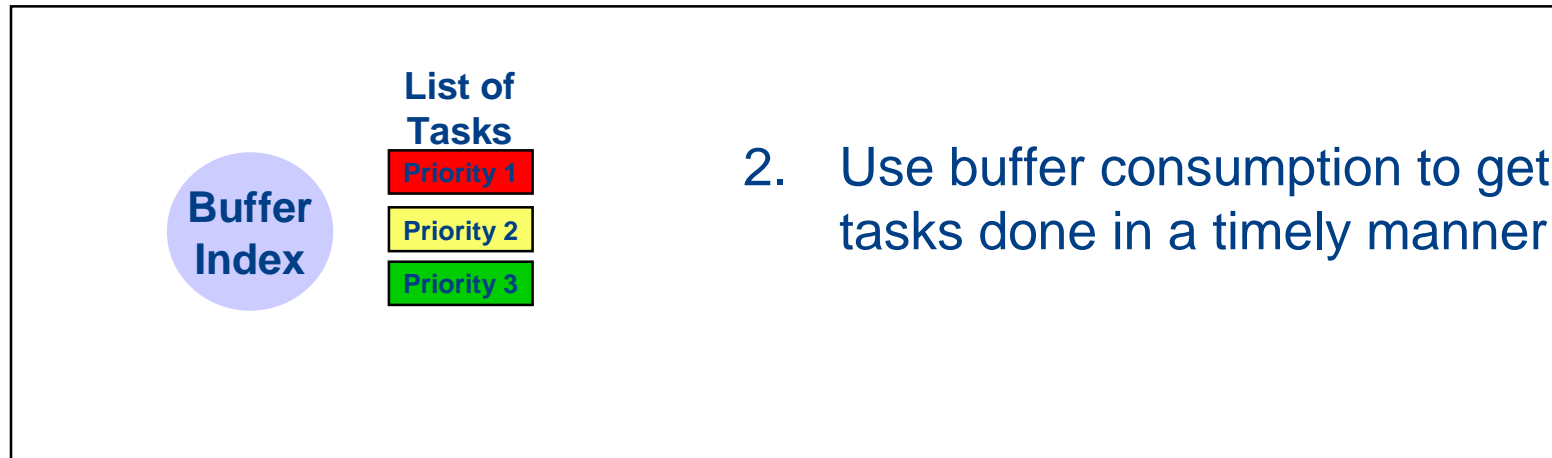


The three high-level processes

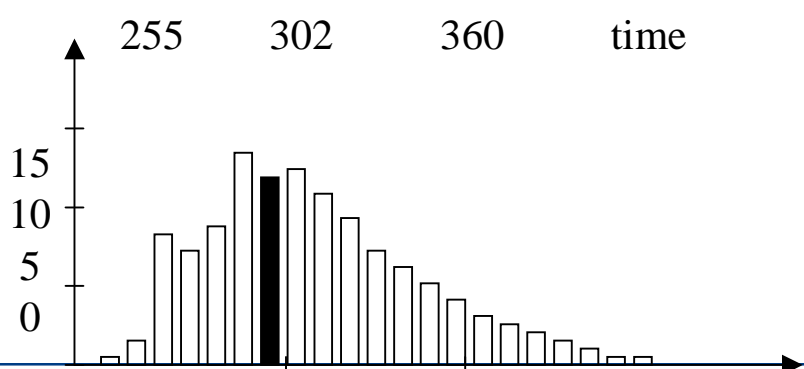
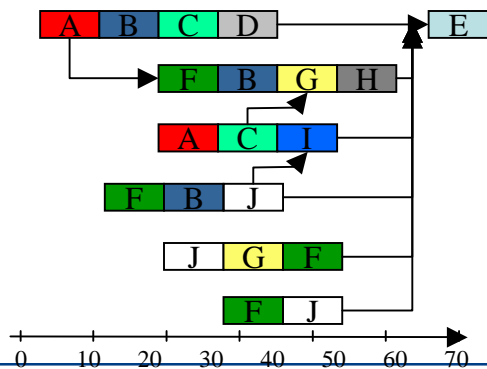
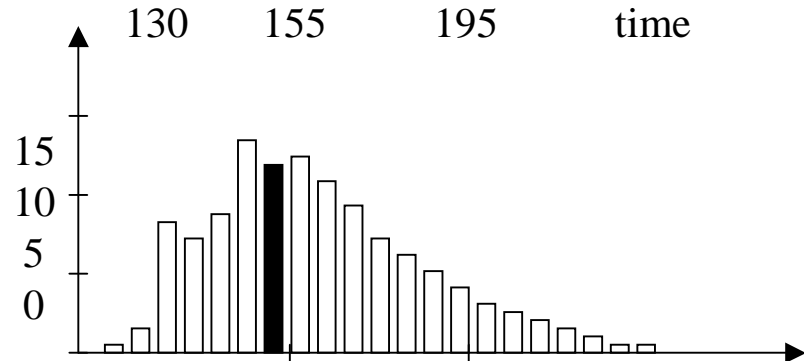
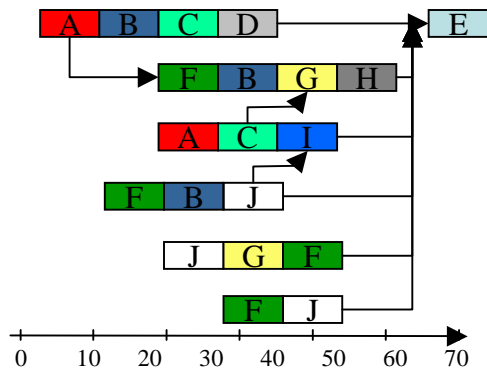
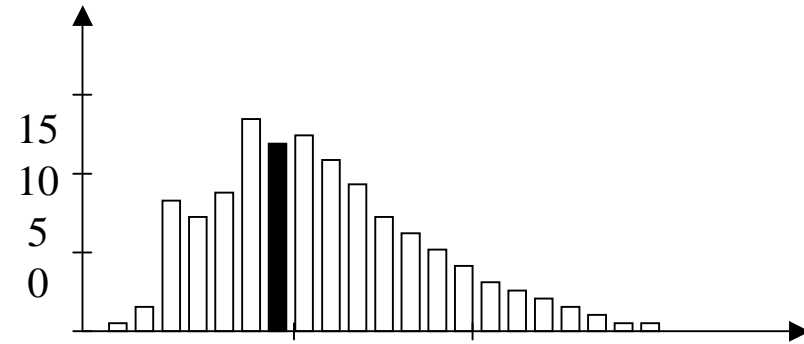
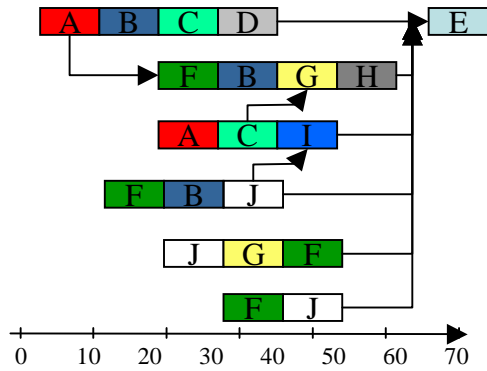
PLANNING



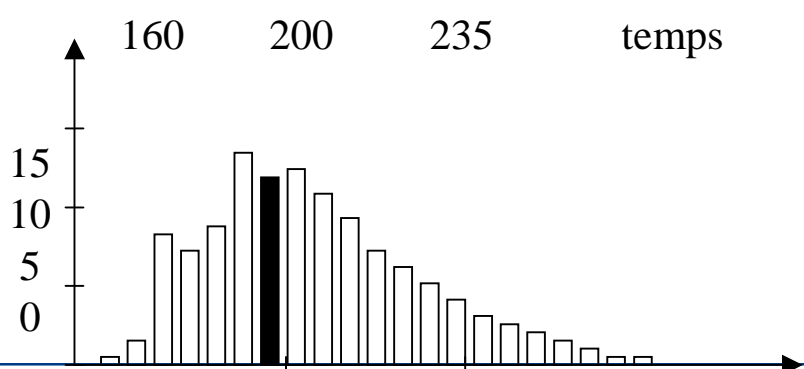
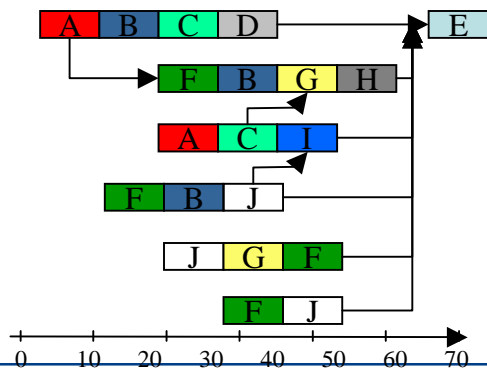
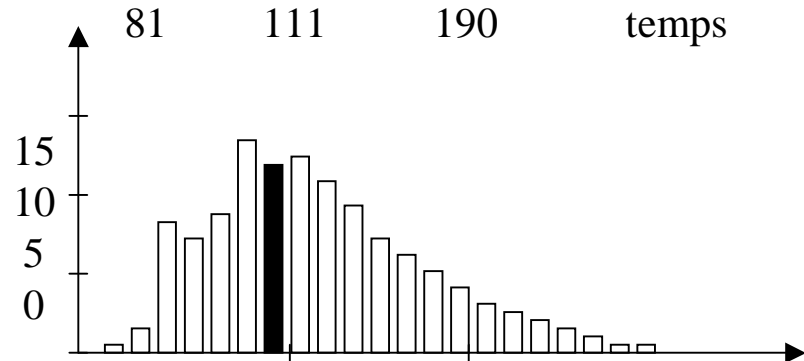
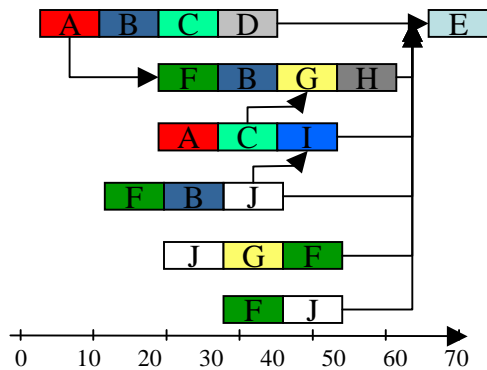
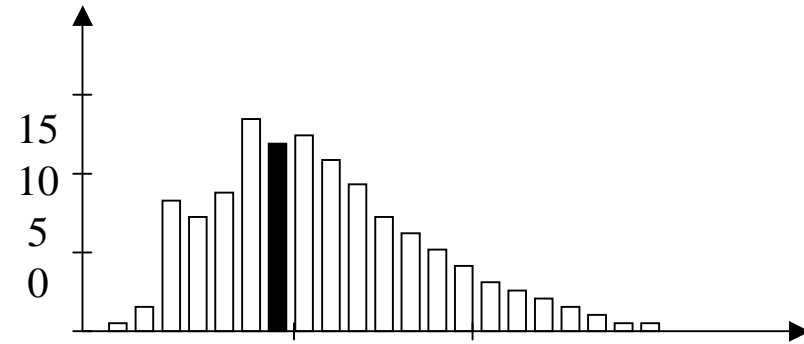
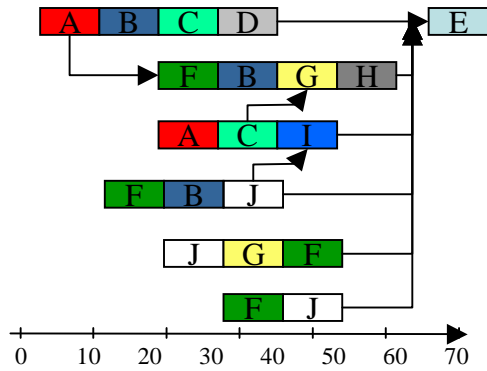
EXECUTION: *гласность*



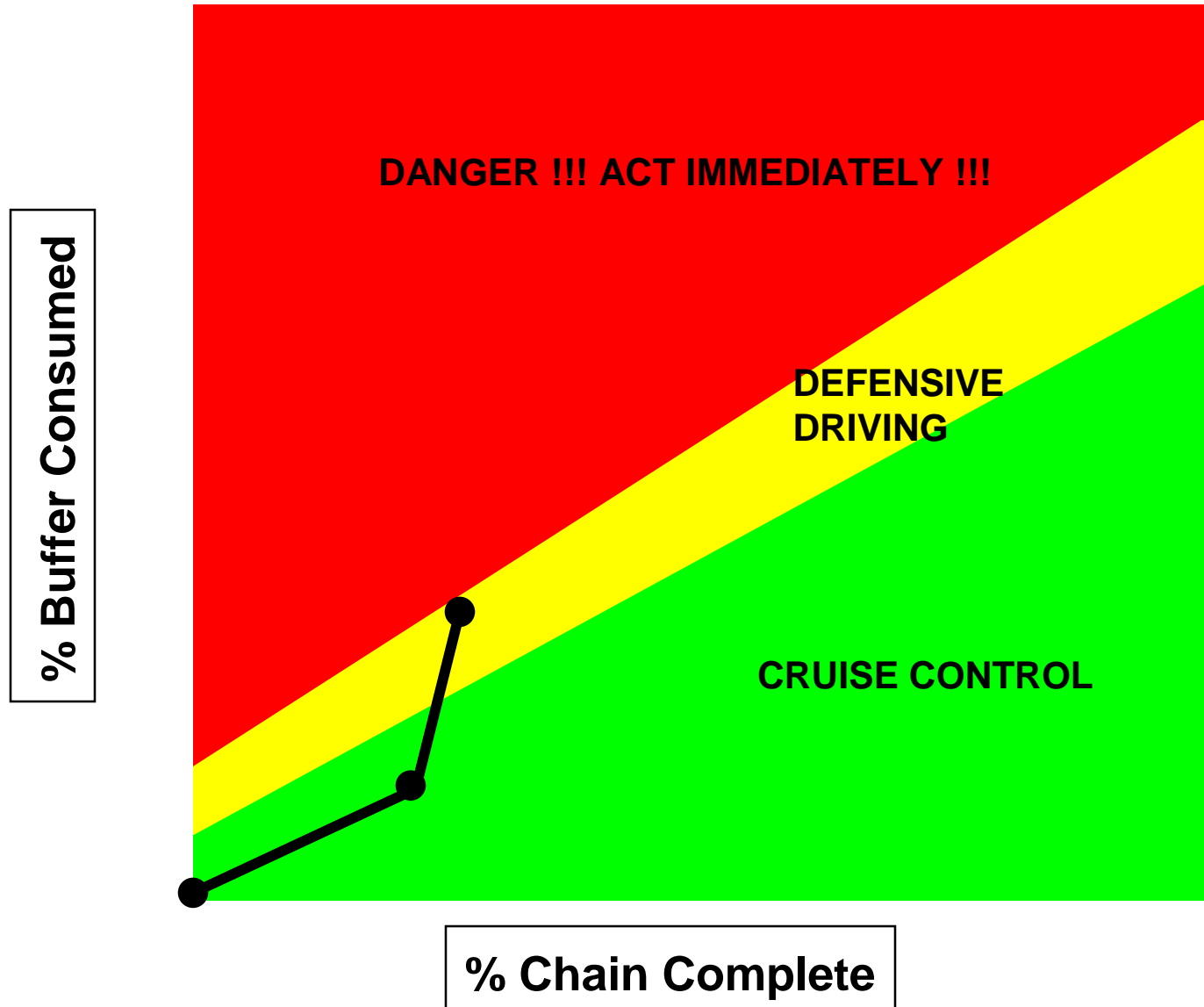
Statistical effect of the DRUM



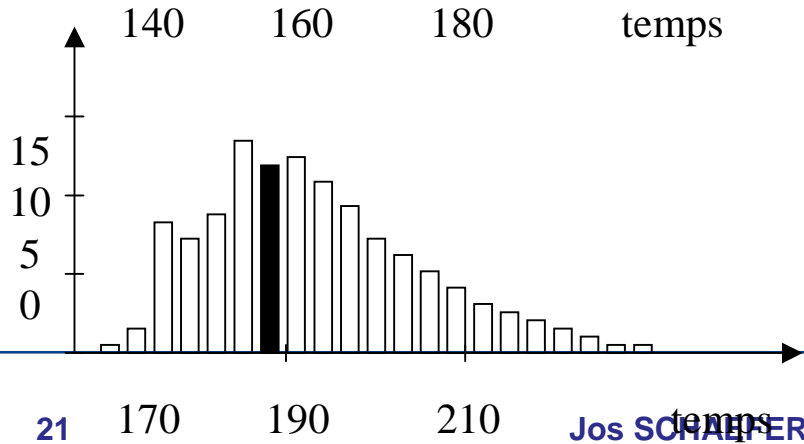
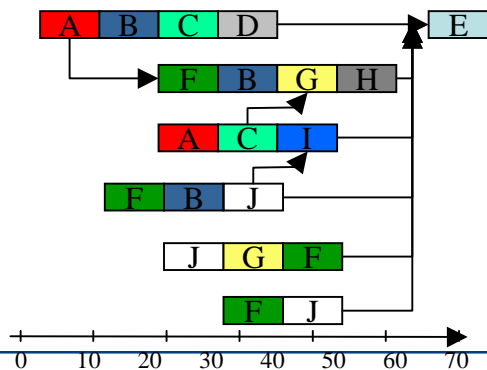
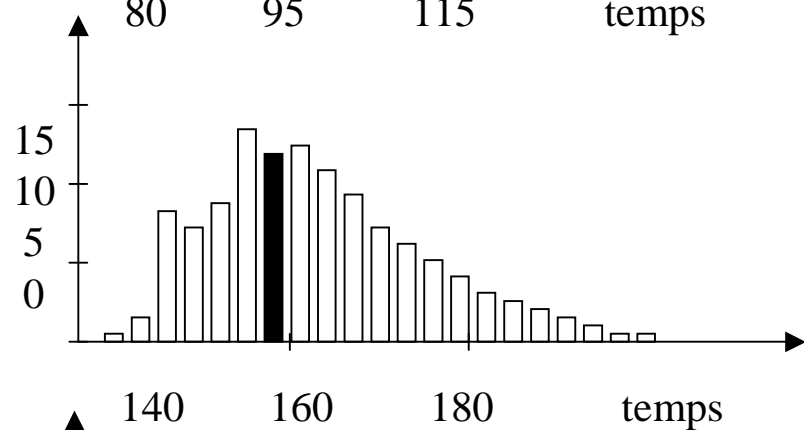
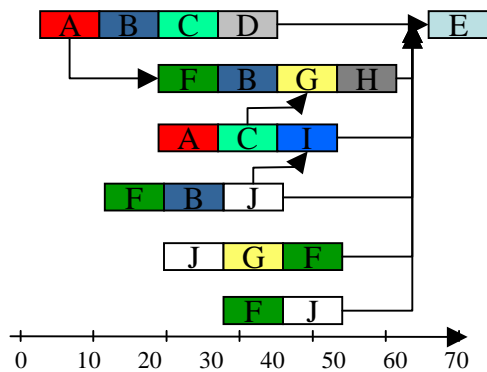
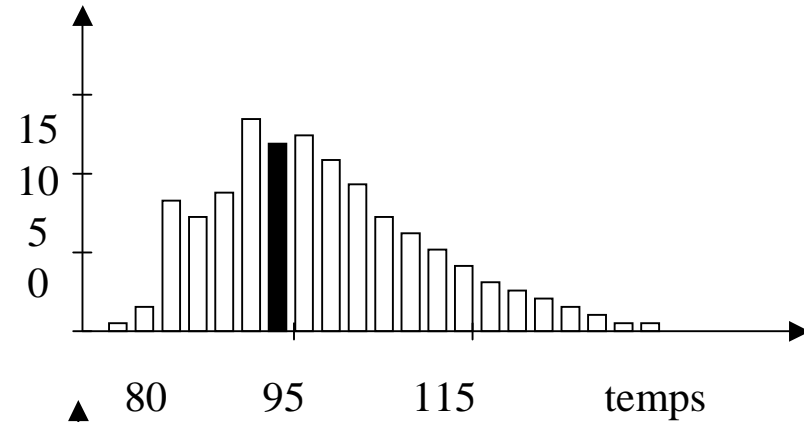
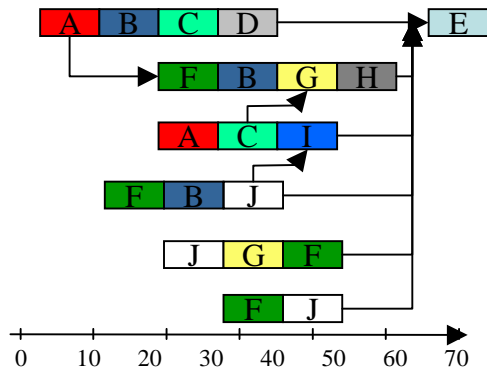
The DRUM + CC an Buffer effects



Fever chart



DRUM+BUFFER+BUFFER MANAGEMENT



Buffer status and tasks priority

Solidarnosć

Red task in Project 2 has the higher priority
because it has a higher Index

Project 1



Buffer Consumption = 50%

Project Completion = 50%

Index = $0.5/0.5 = 1.0$

Project 2



Buffer Consumption = 60%

Project Completion = 33%

Index = $0.6/0.33 = 1.81$

Key-roles // Responsibilities

PLANNING

Сolidarnosć



Project Managers

- Plan the network
- Analyse the critical chain
- Decide upon the buffer policy



Master Scheduler

- Plan and test the pipeline
- Monitor the pipeline
- Emphasize issues in the pipeline

Executives

- Control project starts
- Resolve pipeline level conflicts
- Remove policy-type execution obstacles

EXECUTION

ГЛАСНОСТЬ



The new JOB

Task Managers

- Prepare for upcoming tasks
- Assign people
- Get tasks executed in a timely manner
- Update task status
- Buffer consumption causes

Resource Managers

- Identify and remove resource bottlenecks
- Manage Task Managers

Project Managers

- Investigate emergent delays
- Plan and execute recovery actions

Actual results



- Less than 5 project out of 100 only are (a bit) late
- Most of the projects are before time
- Budgets are respected
- Priority meetings become civilized and short meetings
- WHY?
 - Solidarność : my task....
 - гласность : Measurements out of buffer management

Business Expectations



- Capacity becomes available
- Business is growing
- Your competitors don't understand
- One day you will experience *a true rather than apparent* capacity constraint resource!!!!