NON ZERO RATIO

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Quality in Projects

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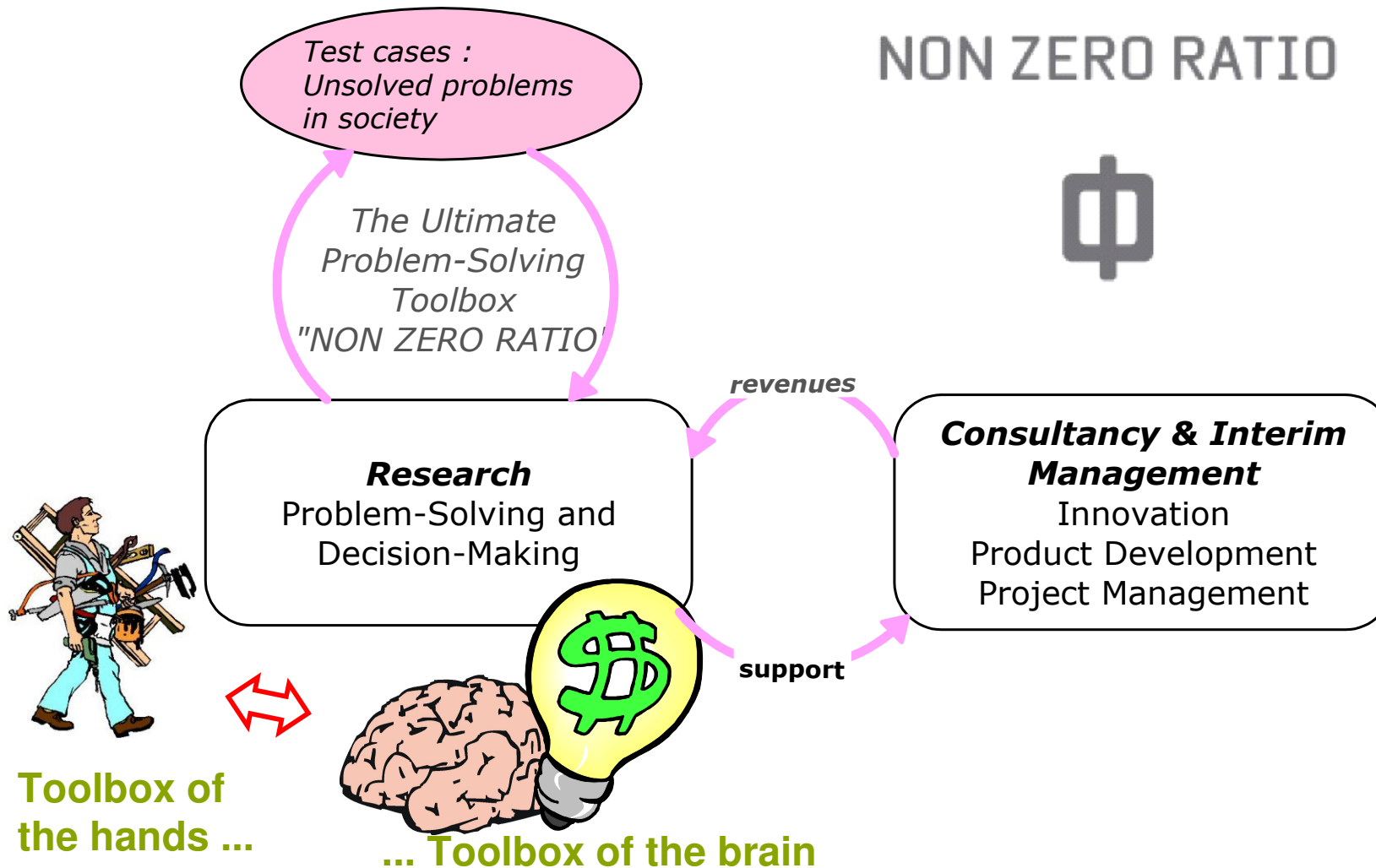
PMI BELGIUM Chapter

Overview

1. My background
2. Situating the relevance of problem-solving for project quality
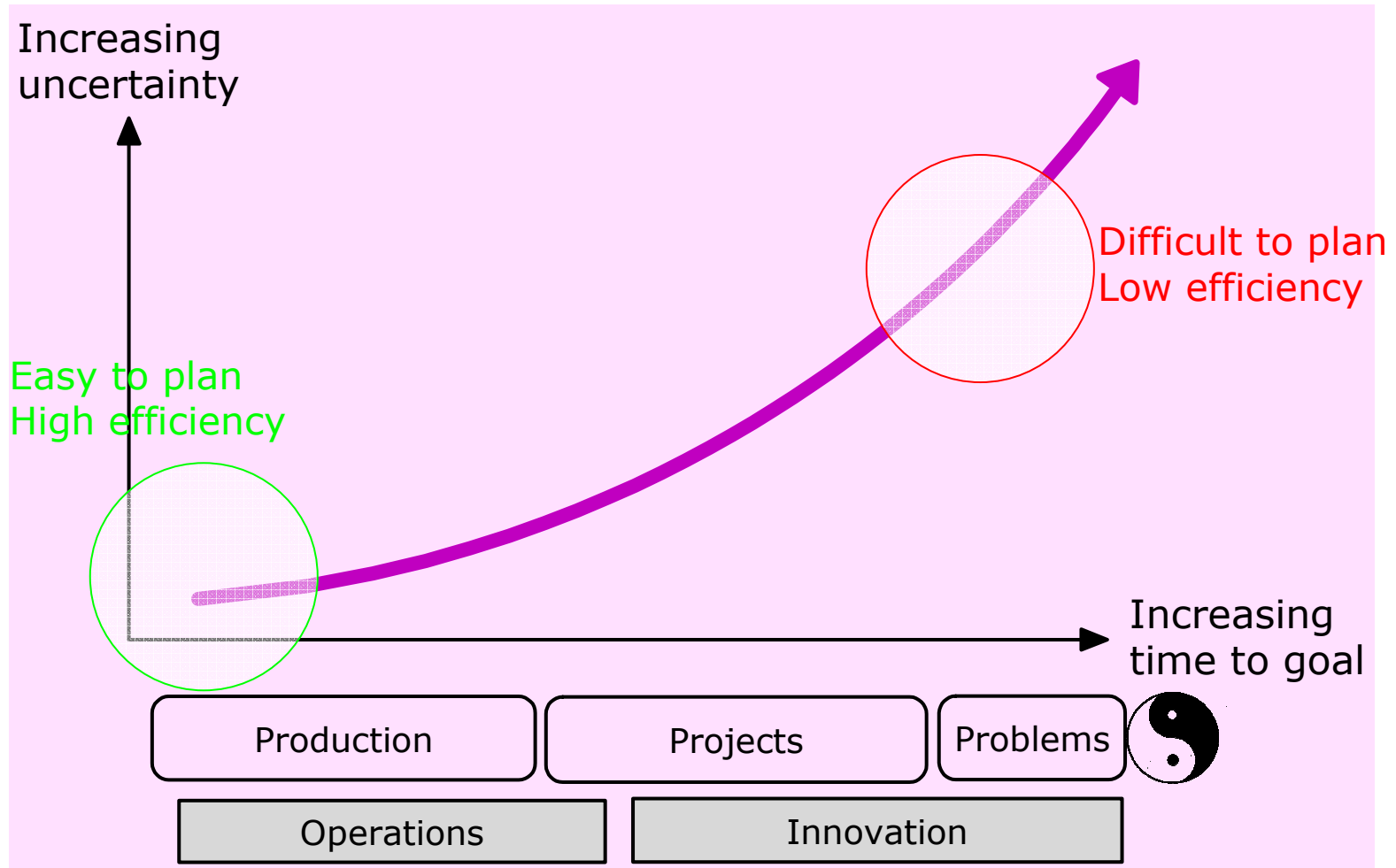3. Three claims from problem-solving area fundamentally affecting project quality

1. My background

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Test cases :
Unsolved problems
in society

The Ultimate
Problem-Solving
Toolbox
"NON ZERO RATIO"

Research
Problem-Solving and
Decision-Making

revenues

**Consultancy & Interim
Management**
Innovation
Product Development
Project Management

support

**Toolbox of
the hands ...**

... Toolbox of the brain

2. Relation between problem-solving and project management : focus on UNCERTAINTY and WIN-WIN

Increasing uncertainty

Difficult to plan
Low efficiency

Easy to plan
High efficiency

Increasing time to goal

Production	Projects	Problems

Operations	Innovation

3 Three claims from problem-solving area fundamentally affecting project quality

- Impact of uncertainty on project duration

  THE MORE RELIABLE YOUR TASK DURATION ESTIMATES, THE LONGER YOUR PROJECT TAKES

- Impact of WIN-WIN on roles and responsibilities

  RESTRICTING RESPONSIBILITIES THROUGH CLEAR JOB DESCRIPTIONS DETERIORATES THE QUALITY OF THE PROJECT

- Impact of local optimisation on project quality

  MONITORING TEAM RELATIONS IS MORE IMPORTANT THAN MONITORING SCHEDULE AND BUDGET AND IS A MAJOR CONTRIBUTOR TO PROJECT QUALITY
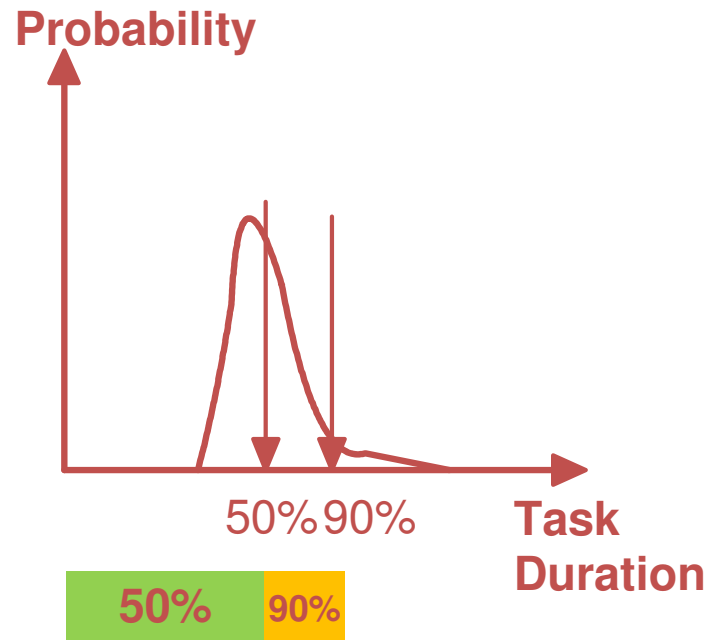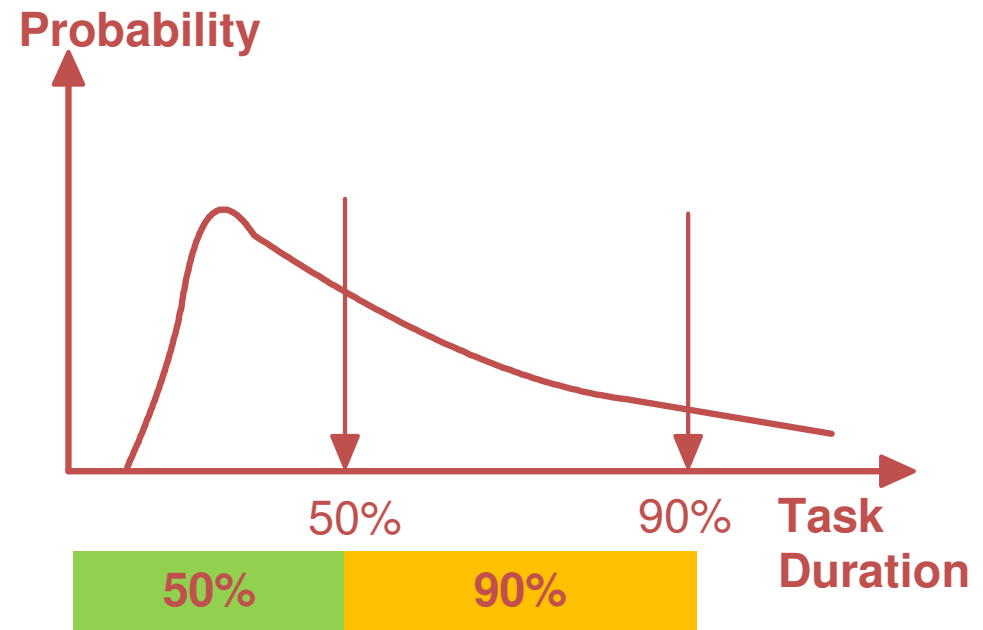
Impact of uncertainty on project duration

CLAIM

THE MORE RELIABLE YOUR TASK DURATION ESTIMATES, THE LONGER YOUR PROJECT TAKES

Task durations : when estimating

Probability

Probability

50% 90%

Task Duration

50%

90%

Task Duration

50%	90%

50%	90%

Task with less uncertainty

Task with higher uncertainty

The higher the uncertainty, the more difference between the value of a 50% estimate and a 90 % estimate

Expected duration ? ...

- PM-BOK (ed.4, p.150) mentions use of PERT to calculate an expected duration T(e) from from the optimistic T(o), pessimistic T(p) and most likely T(m) duration:
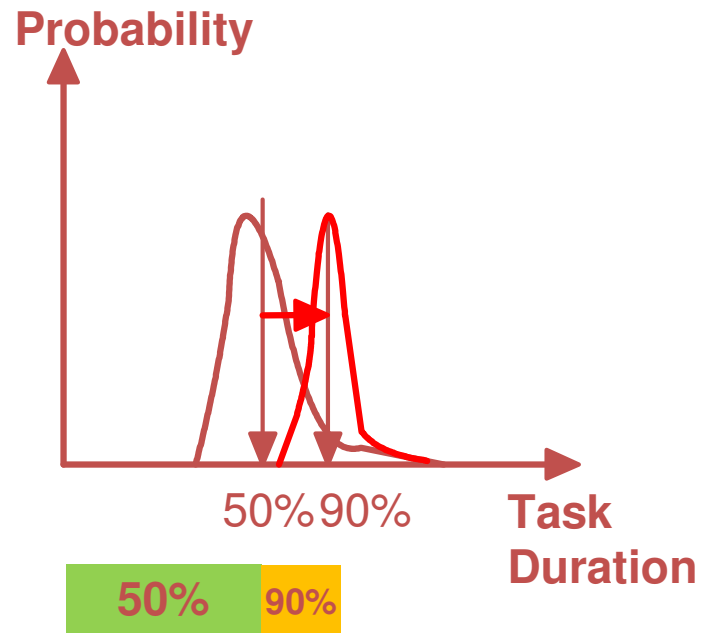
$$T(e) = \frac{T(o) + 4 * T(m) + T(p)}{6}$$

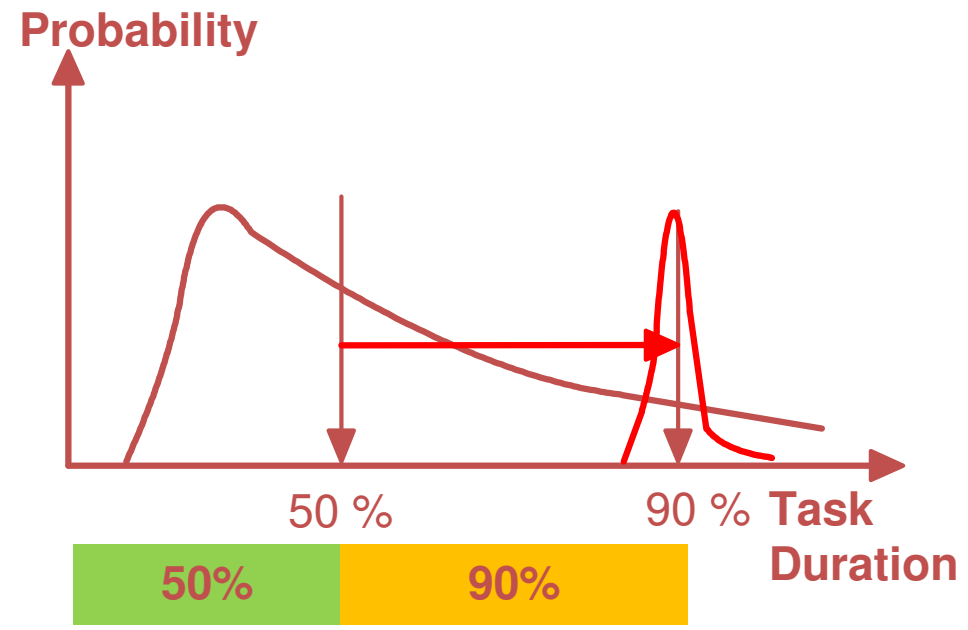- But do we really expect the task duration to be T(e)?

Task durations : when executing

Probability

50% 90%

Task Duration

50%	90%

Task with less uncertainty

Probability

50 % 90 %

Task Duration

50%	90%

Task with higher uncertainty

Estimates turn into self-fulfilling prophecies ... !

The importance of reliability !?

What happens to your task duration estimate when you are expected to be very reliable?

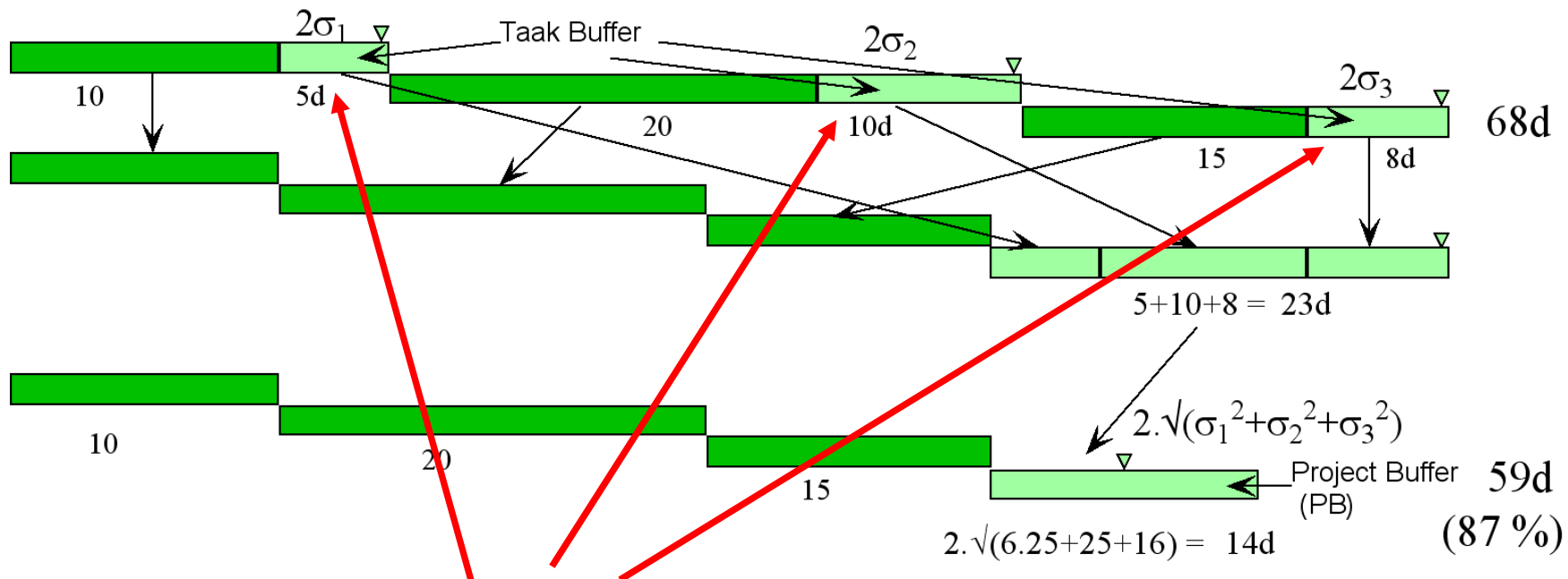What happens when your task duration estimate would have to be 6-sigma reliable?

Conclusion

The more reliable your team is in its task duration estimates, the longer the project will take ...

The solution: critical chain project management (PM-BOK Ed.4 p. 155)
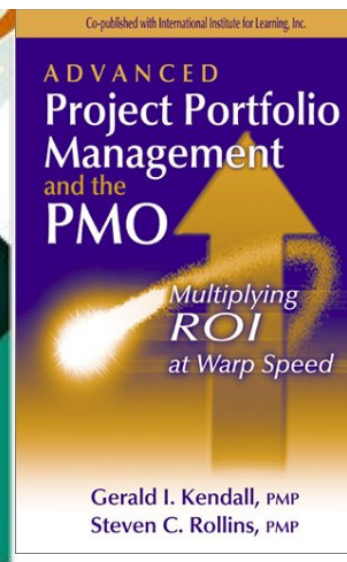
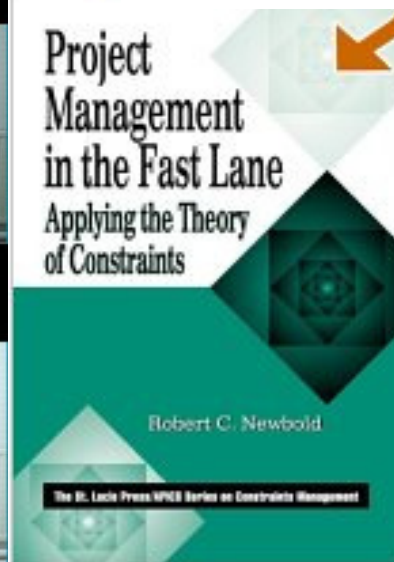- ## Do not protect the task but the project!

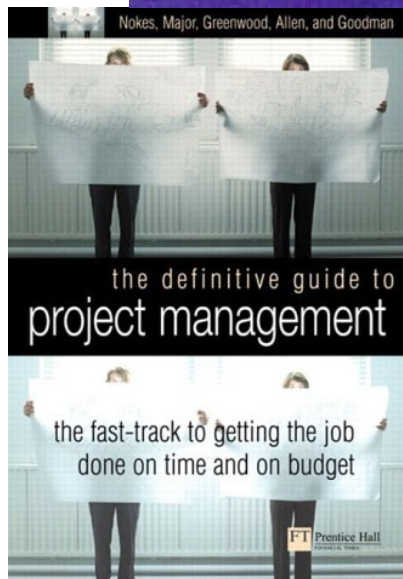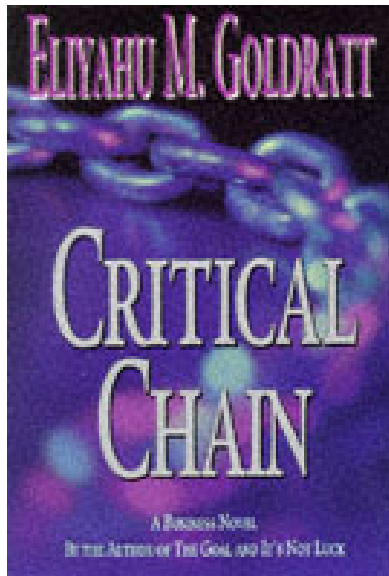- Understand and try to avoid the uncertainties in each task that make the difference between the optimistic and pessimistic estimate: try to realise the optimistic one !!!

Piece of Cake – is it ?

More on critical chain project management

Impact of WIN-WIN on roles and responsibilities

CLAIM

RESTRICTING RESPONSIBILITIES THROUGH CLEAR JOB DESCRIPTIONS DETERIORATES THE QUALITY OF THE PROJECT

Impact of WIN-WIN on roles

- Impact of clear roles and responsibilities:
  - I am in charge of this thus not of that
  - I can see that THAT is not as it should be, but it is not my responsibility. I will only get into trouble if I would raise this issue ...
- Hierarchy limits sense of responsibility!
- Hierarchy limits / slows down flow of information of interesting data!

  But projects are in need of these interesting data!
- Hierarchy/roles & responsibilities therefore deteriorate project quality

  A case of local optimisation ...

How to act like an owner?

- Everybody should act as (s)he thinks the owner would act if the owner would be in his/her place
  - Everybody is responsible for everything, with a focus (80-90%) to the tasks identified in the job description (roles and responsibilities) ("holograpic model"): this reinstalls previously blocked communication
  - Information can thus flow all directions
  - Competing project managers ("management by decibels" to get the resources) should therefore not compete ...
- **Easy?** No ...
  Requires :
  - Different view on how organisations have to function and on behaviour ("non zero organisation")
- What can you do now?
  - Ask: what would you do if you were the big boss – the customer – the supplier ...
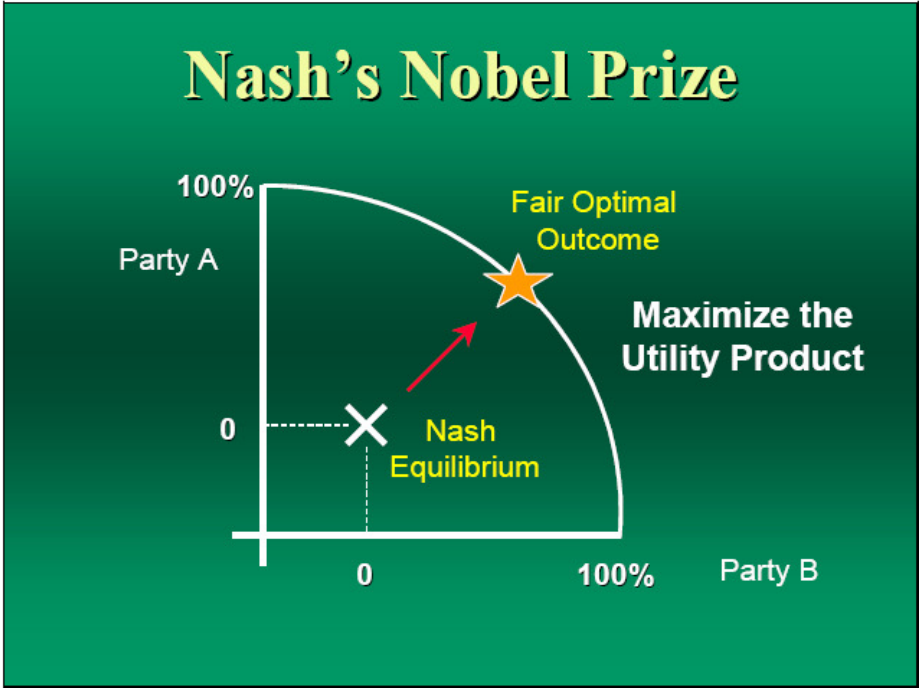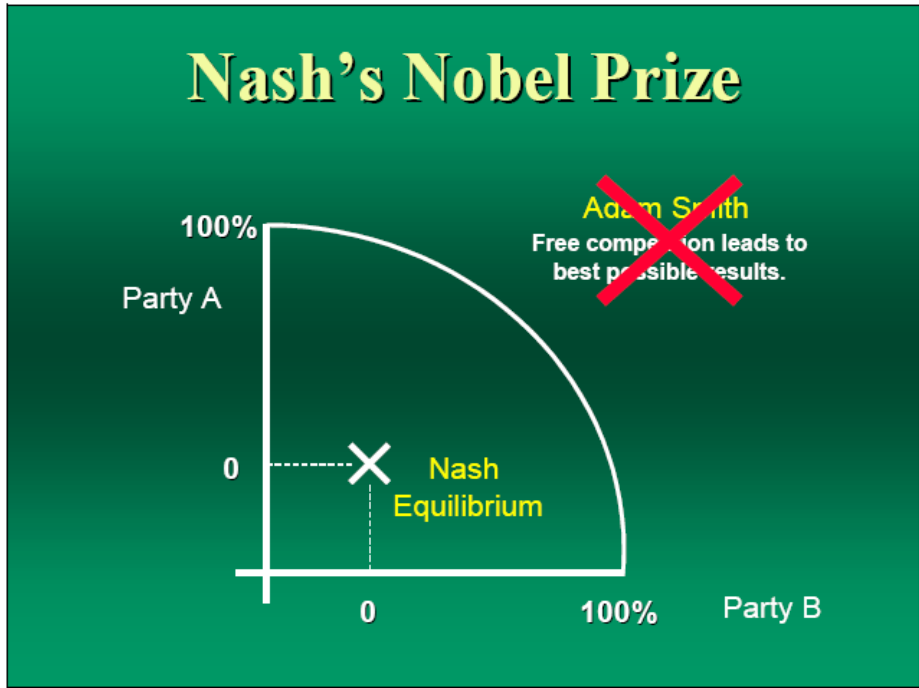
CLAIM

MONITORING TEAM RELATIONS IS AT LEAST AS IMPORTANT AS MONITORING SCHEDULE AND BUDGET AND IS A MAJOR CONTRIBUTOR TO PROJECT QUALITY

Local optimizations ⇔ The Relevance of WIN-WIN

John Nash "A beautiful mind"

Nash's Nobel Prize

Party A

100%

Adam Smith
Free competition leads to best possible results.

0 ✕ Nash Equilibrium

0   100%   Party B

Nash's Nobel Prize

100%

Party A

Fair Optimal Outcome ⭐

Maximize the Utility Product

0 ✕ Nash Equilibrium

0   100%   Party B

John Nash was a brilliant mathematician who attended Princeton University at the same time as Albert Einstein. Nash did some impressive things with numbers that computers could not match, and he has now been given wide recognition for work on the problem of solving complex disputes with negotiation. Nash's research in the 1950s resulted in a 1994 Nobel Prize in Economics. In his most widely known work, Nash (1950 a, 1951) said that, *without cooperation*, conflict leads to a non-optimal equilibrium. This non-optimal equilibrium has come to be known as the *Nash Equilibrium,* challenging prevailing classical economic theory based on the ideas of Adam Smith who said that it was *free competition* that led to best-possible results.

Source: http://www.smartsettle.com/smart2011/wp-content/uploads/2011/03/Mobile-ODR-with-Smartsettle.pdf
Proceedings of the UNECE Forum on ODR 2003
Mobile Online Dispute Resolution with SmartSettle by Ernest M. Thiessen and Ken Fraser

The relevance of WIN-WIN to organisations

Projects have a strong potential for local optimisations:

- Team member roles
- Customer
- Suppliers
- Company divisions / hierarchy
- ...
- and ... not to forget.... Problems !

The onset of communication breakdown : negative convictions arise due to polarisation

- Negative convictions "grow" in case of problems tackled with local optimisation (no win-win)
- They are considered real by our brain (due to evidence)
- Compare this brain (mal)function with optical illusion : sensor-signal interaction
- Negative convictions can be considered a brain-signal interaction caused by lack of problem-solving ability (no win-win found / sought)
- Negative convictions lead to reduced communication and avoidance, and, more importantly, a local rather than global optimisation
- Optimal problem-solving capacity leads to "leadership in uncertainty"

Lack of problem-solving => no win-win => Negative conviction
=> communication breakdown => local optimisation => win-win impossible

Relevance to project quality

- Assuming a complex project :
  - many interfaces
- Assuming complex interface management
  - There are always gray zones that need to be cleared
- Assuming two people having to interact on an interface "with a mutual negative conviction"
  - Focus on their own responsibility – minimum communication

  =>Increased risk that "the grey zone is not fully covered"

  =>Increased risk that project at later stage gets into trouble

Relevance to Project Quality

- Have you heard about the rule that "the last 10% of a project takes as long as the initial 90%"?

- While cost and schedule are unlikely to indicate problems early in the project, the monitoring of human relations (negative convictions) is an **early** indicator proportional to future risks.

- MONITORING TEAM RELATIONS IS THEREFORE AT LEAST AS IMPORTANT AS MONITORING SCHEDULE AND BUDGET AND IS A MAJOR CONTRIBUTOR TO PROJECT QUALITY

The solution: avoiding negative convictions

- Informal communication is important
- Informal communication works at its best when all entities can operate as "friends"
- Negative convictions (and onset there-of) must be avoided by adequate problem-solving (aiming at finding the win-win solution) but that is another story
- Truly *respecting* somebody = not having a negative conviction about that person ...

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The End

THANK YOU