Mantras
for
Predictable Projects

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Mantra: a word or phrase that is repeated often or that expresses someone's basic beliefs

Interesting project

- ESA imposed project model - super waterfall: 10 years project
- Some 40 people, several sub-groups
- Very knowledgeable engineers

Will we be on time ?

- Talking to engineers:
  - No
  - We're so busy - so much to do - so little time - lot of stress
  - If we continue this way (always needing more time than we have available) the project will take more time than we can afford

  What are we going to do about it ?

  Failure is not an option

- Talking to project manager and management:
  - No
  - Perhaps the next project …

  If this project is late, the next project will also be late

Example

- Many documents to be reviewed within two weeks

- How many documents to review ?
- How much time per document ?
- How much time available ?
  - Needed time: 99 hrs
  - Available time: 46 hrs
- Show some possible solutions
- The puzzle of project planning is a design problem
- Now these engineers can handle it
- Result ?

Who's waiting for it ?

- Why are we doing this ?
- Is it really necessary ?
- Is it really necessary *now* ?
- Who's waiting for it ?
- What does he need ?
- How much does he need ?
- Why ?

- Example:
  "It worked ! The magic sentence worked !"

Preflection

- *Reflection* is good for learning, but shouldn't happen too often
- Only *Preflection* can save time

- Retrospectives ?
- Rather *Prespectives*

- Using Plan Do Check Act rather than Pl-Do

Two simple Requirements for a supplier

- Two simple Requirements for a supplier:
  - Any time you deliver, within a week
    the users will be not less efficient than before
  - You'll get paid only if the users decide they're happy
- It's up to the supplier to find out how to be successful

- If a supplier doesn't accept these simple requirements,
  he actually is saying:
  - If I deliver, the users will be less efficient than before
  - The users may be unhappy with my delivery

No cure – no pay

Suppliers: You find out how to achieve that !

Aren't you the professionals ?

Ultimate Goal of a Project

Quality on Time

- Delivering the Right Result at the Right Time, wasting as little time as possible (= efficiently)

- Providing the customer with
  - what he needs
  - at the time he needs it
  - to be satisfied
  - to be more successful than he was without it
- Constrained by (win - win)
  - what the customer can afford
  - what we mutually beneficially and satisfactorily can deliver
  - in a reasonable period of time

Evolutionary Project Management (Evo)

- Plan-Do-Check-Act
  - The powerful ingredient for success
- Business Case
  - *Why* we are going to improve *what*
- Requirements Engineering
  - *What* we are going to improve *and what not*
  - *How much* we will improve: quantification
- Architecture and Design
  - Selecting the optimum compromise for the conflicting requirements
- Early Review & Inspection
  - Measuring quality while doing, learning to prevent doing the wrong things

Right product

Evo Project Planning

- Weekly TaskCycle
  - Short term planning
  - Optimizing estimation
  - Promising what we can achieve
  - Living up to our promises
- Bi-weekly DeliveryCycle
  - Optimizing the requirements and checking the assumptions
  - Soliciting feedback by delivering Real Results to *eagerly waiting* Stakeholders
- TimeLine
  - Getting and keeping control of Time: Predicting the future
  - Feeding program/portfolio/resource management

Efficiency of what we do

Effectiveness of what we do

Right time

What will happen and
what will we do about it ?

Evo Planning

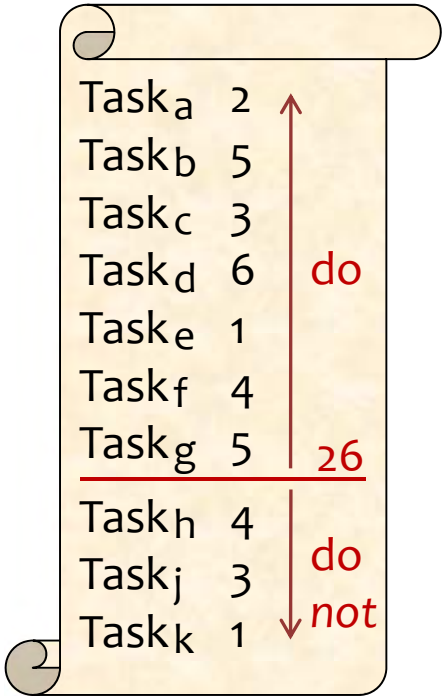
- Weekly TaskCycle
  - Optimizing the efficiency of our work
- Biweekly DeliveryCycle
  - Optimizing the effectiveness of our work
- TimeLine
  1. What will happen if this problem, these people, this efficiency, …
     - Using Calibration
  2. What are we going to do about it
     - Value still to earn within the time still available

7 options

- Hope (fatalistic)
- Has to be done (macho)
- Working overtime
- Moving the deadline
- Adding people
- Saving time
- Killing the project

TaskCycle

- How much time do we have available = gross available time
- 2/3 is plannable time
  - What are the most important things to do
  - We work on the most important things only.
    We don't allow ourselves to work on anything less important
  - How much time do these things take
  1. How much time do you need
  2. How much time do you have
  3. How much time should you use
  4. How much time do you give yourself
- What will fit the available plannable time
- What will be done at the end of the TaskCycle
- What will ***not*** be done



- Will this be completely done by the end of the cycle? How do you know?
- It's ok if you promise to do nothing as long as that is done, completely done

More mantras

- We are not perfect, but the customer shouldn't find out
- Time is money and we don't have the right to waste it, unless it's our own
- Every day we know a problem earlier, we have a day more to do something about it
- How do we make sure that in the end we don’t need an excuse
- Looking back we see that nobody could have done better, not even us
- After the match, you cannot score a goal
- Only 100% done is done. Avoiding the 90% syndrome
- We don't collect metrics, we consume them immediately for learning

More mantras

- The fallacy of ‘all’ requirements
- Design is finding the optimum compromise between the conflicting requirements
- Vanilla Ice cream effect
  Don't believe what they say; check!
- If the requirements aren’t clear (which is usually the case), any schedule will do
- What we deliver, simply works
  Does that mean without bugs ?
- Can we do less, without doing too little ?
  Not doing what later proves to be superfluous
  Can we do less, while delivering more ?

More mantras

- Delivery Time is a Requirement, like all other Requirements
  How come most projects are late ?
- Requirements are what the Stakeholders require
  however, for a project ...
  Requirements are the set of stakeholder needs that the project is planning to satisfy
- Customer ‘requirements’: Nice Input
- If we add something, something else will not be done
- What the customer wants, he cannot afford
  If we do that, we fail from the beginning

More mantras

- The Bullshit stamp
- People aren't against change
  Subconsciously they don't like uncertainty
- What is the cost of one day of (unnecessary) delay
- Important metric: Size of the smile of the customer
- About half of what people do in a project later proves to be unnecessary hence being on time is easy
- People make mistakes, we are people, therefore when we produce something, we're injecting defects
- The better focus, the less we'll waste time

More mantras

- In any meeting with more than one person, we use a projector
- The owner of the text types
- Where are the whiteboards ?
- What you write down can be discussed and changed
  What you do not write down, evaporates immediately

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First Think, Then Do

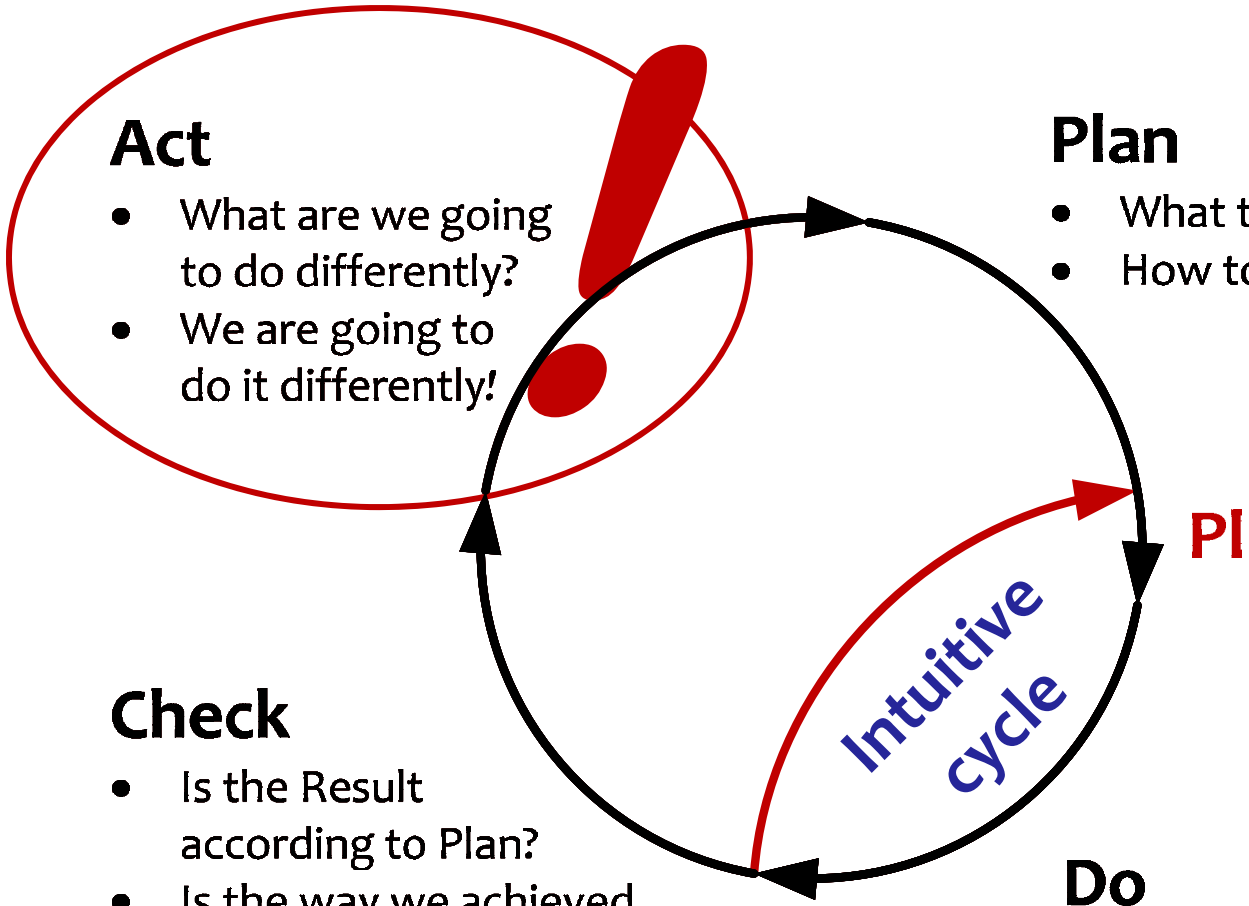
Insanity is doing the same things over and over again and hoping the outcome to be different *(let alone better)*

Albert Einstein 1879-1955, Benjamin Franklin 1706-1790, it seems Franklin was first

- Only if we change our way of working, the result may be different
  - Hindsight is easy, but *reactive*
  - Foresight is less easy, but *proactive*
  - Reflection is for hindsight and learning
  - Preflection is for foresight and prevention
- Only with prevention we can save precious time
- This is used in the Deming/Plan-Do-Check-Act cycle

The essential ingredient: the PDCA Cycle

(Shewhart Cycle - Deming Cycle - Plan-Do-Study-Act Cycle - Kaizen)



Active Synchronization

Somewhere around you, there is the bad world.

If you are waiting for a result outside your control, there are three possible cases:

1. You are sure they'll deliver Quality On Time
2. You are not sure
3. You are sure they'll not deliver Quality On Time

- If you are not sure (case 2), better assume case 3
- From other Evo projects you should expect case 1
- Evo suppliers behave like case 1

In cases 2 and 3: Actively Synchronize: Go there !

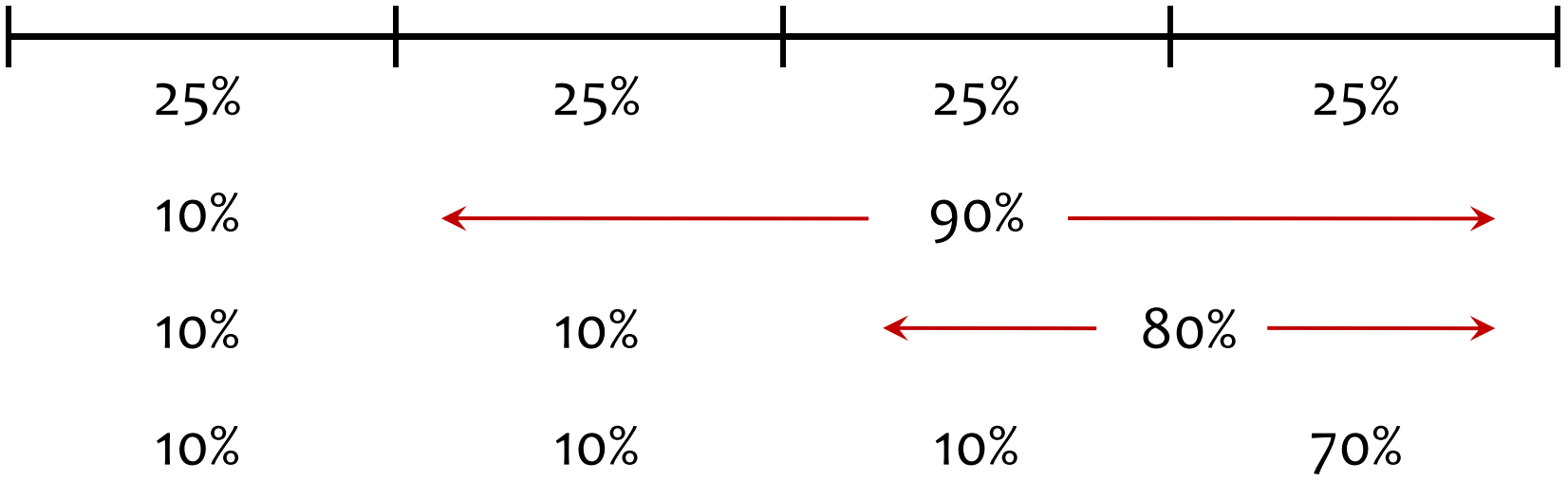
1. Showing up increases your priority
2. You can resolve issues which otherwise would delay delivery
3. If they are really late, you'll know much earlier

Interrupt Procedure "We shall work only on planned Tasks"

In case a new task suddenly appears in the middle of a Task Cycle (we call this an Interrupt) we follow this procedure:

1. Define the expected Results of the new Task properly
2. Estimate the time needed to perform the new Task, to the level of detail really needed
3. Go to your task planning tool (many projects use the ETA tool)
4. Decide which of the planned Tasks is/are going to be sacrificed (up to the number of hours needed for the new Task)
5. Weigh the priorities of the new Task against the Task(s) to be sacrificed
6. Decide which is more important
7. If the new Task is more important: replan accordingly
8. I the new Task is not more important, then do not replan and *do not work* on the new Task. Of course the new Task may be added to the Candidate Task List
9. Now we are still working on planned Tasks.

4 week project



If we add something …

If we add something, something else will not be done

Rather than letting it happen *randomly*

We better *decide* what will happen