How to deliver Quality On Time

The Right Result at the Right Time

www.malotaux.nl/conferences

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Niels Malotaux

- Project and Organizational Coach
- Expert in helping optimizing project performance

- Helping projects and organizations very quickly to become
  - More effective – doing the right things better
  - More efficient – doing the right things better in less time
  - Predictable – delivering as predicted
- Project Rescue

Result Management

Goal of What We Do

Quality on Time

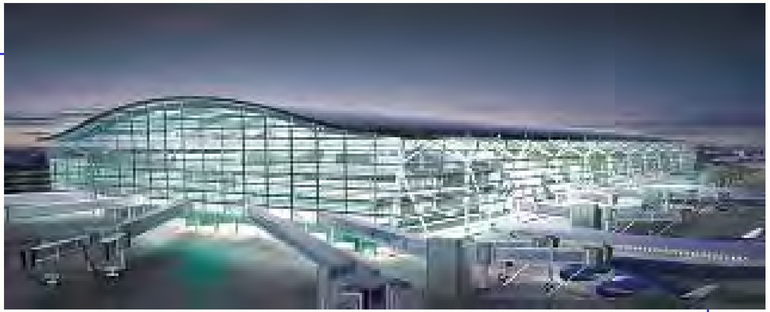
- Delivering the Right Result at the Right Time, wasting as little time as possible (= efficiently)

- 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

Are your projects successful ?

- **Delivering Quality: The Right Results**
- **On Time: At the Right Time**

What is the Right Result ?



- Heathrow Terminal 5: "Great success !"
  - Normal people aren't interested in the technical details of a terminal
  - They only want to check-in their luggage as *easily* as possible

    and
  - Get their luggage back as *quickly* as possible in *acceptable condition at their destination*
  - They didn't
- One of the problems is to determine what the project (or our work in general) really is about
- What are the 'real' requirements ?
- The essence is not *what* but *how well*

Requirements with Planguage

ref Tom Gilb

Definition:

RQ27: Speed of Luggage Handling at Airport

Specific

Scale: Time between <arrival of airplane> and first luggage on belt

Measurable

Meter: <measure arrival of airplane>, <measure arrival of first luggage on belt>, calculate difference

Benchmarks (Playing Field):

Past: 2 min [minimum, 2014], 8 min [average, 2014], 83 min [max, 2014]

Current: < 4 min [competitor y, Jan 2015] ← <who said this?>, <Survey Dec 2014>

Attainable

Record: 57 sec [competitor x, Jan 2012]

Wish: < 2 min [2017Q3, new system available] ← CEO, 19 Jan 2015, <document ...>

Requirements:

Time

Realizable

Tolerable: < 10 min [99%, Q4] ← SLA

Tolerable: < 15 min [100%, Q4, Heathrow T4] ← SLA

Goal: < 15 min [99%, Q2], < 10 min [99%, Q3], < 5 min [99%, Q4] ← marketing

Is being on time important ?

- Delivery Time is a *Requirement*, like all other Requirements
- How come most projects are late ???
- Apparently all other Requirements are more important than Delivery Time
- Are they really ?
- How about your current project ?

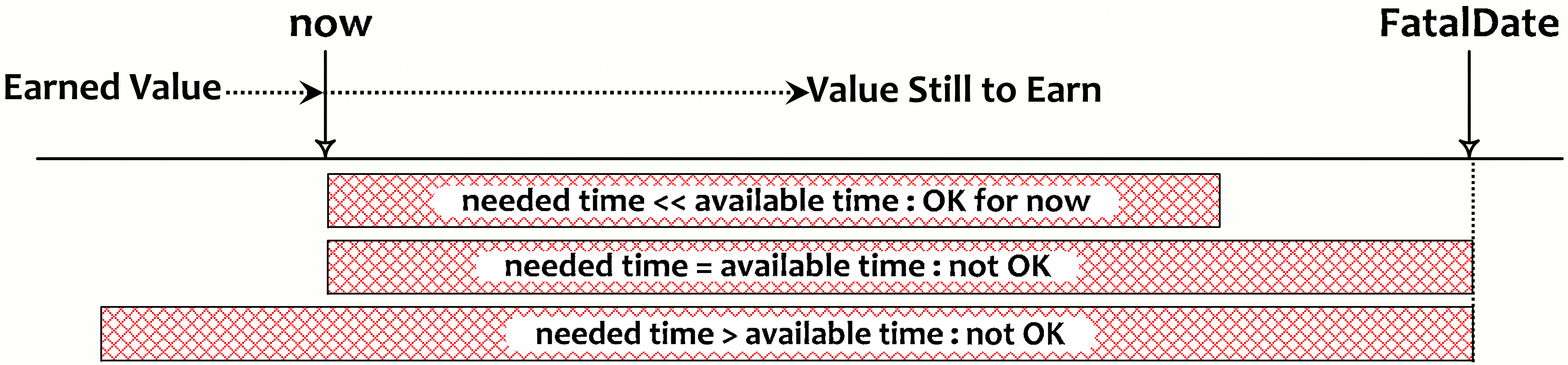
Did anyone tell you to go faster ?

- **Produce more ! → bad quality → produce less**
- **Produce quality ! → produce more**

Quick delivery of a solution that doesn't work means *no delivery*

The problem is: it's counter-intuitive

Any Deadlines ?



now

FatalDate

Earned Value

Value Still to Earn

needed time << available time : OK for now

needed time = available time : not OK

needed time > available time : not OK

- **Value Still to Earn**

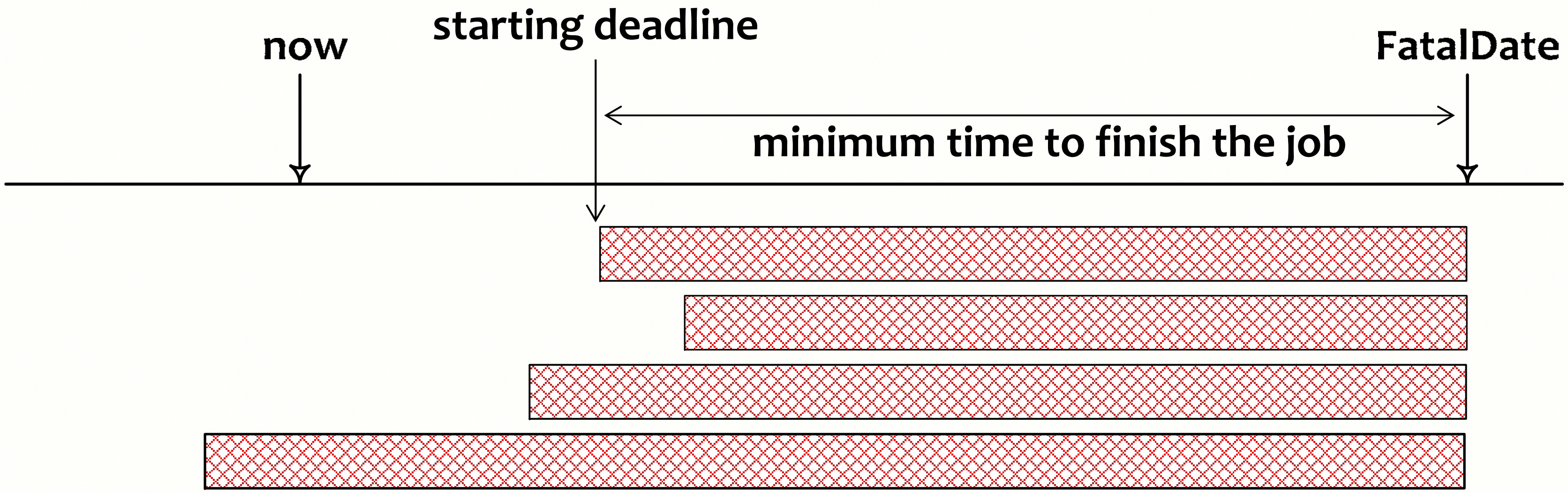
versus

- **Time Still Available**

If the match is over, you cannot score a goal

Even more important: *Starting Deadlines*

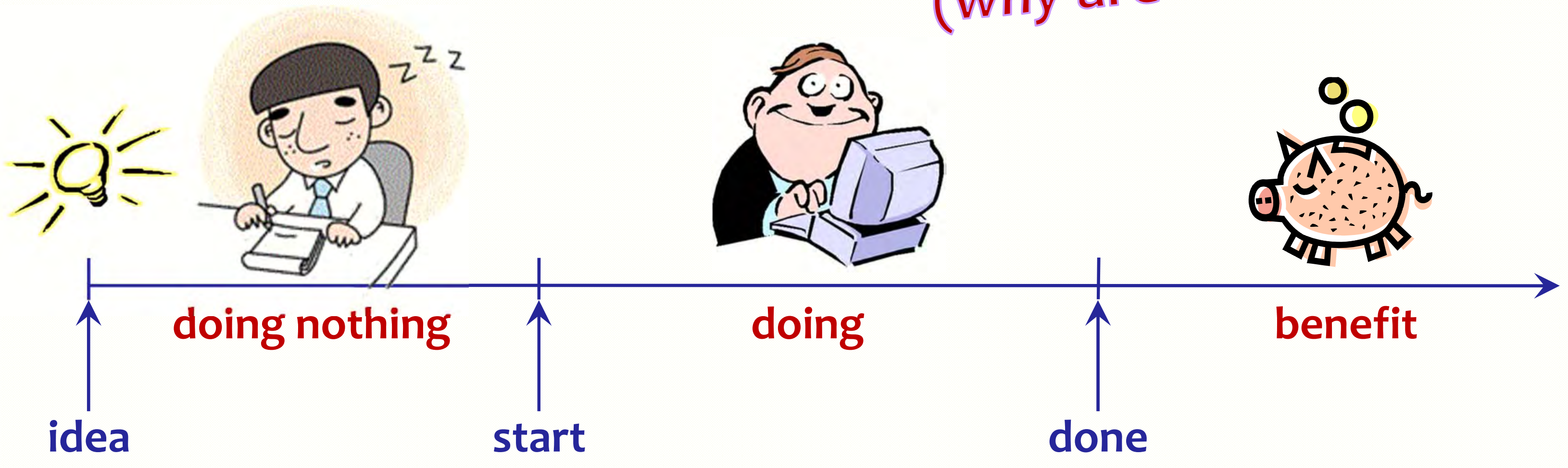
- Starting deadline
  - Last day we can start to deliver by the end deadline
  - Every day we start later, we will end later



The Importance of Time

Business Case

(why are we doing it)



doing nothing

doing

benefit

idea

start

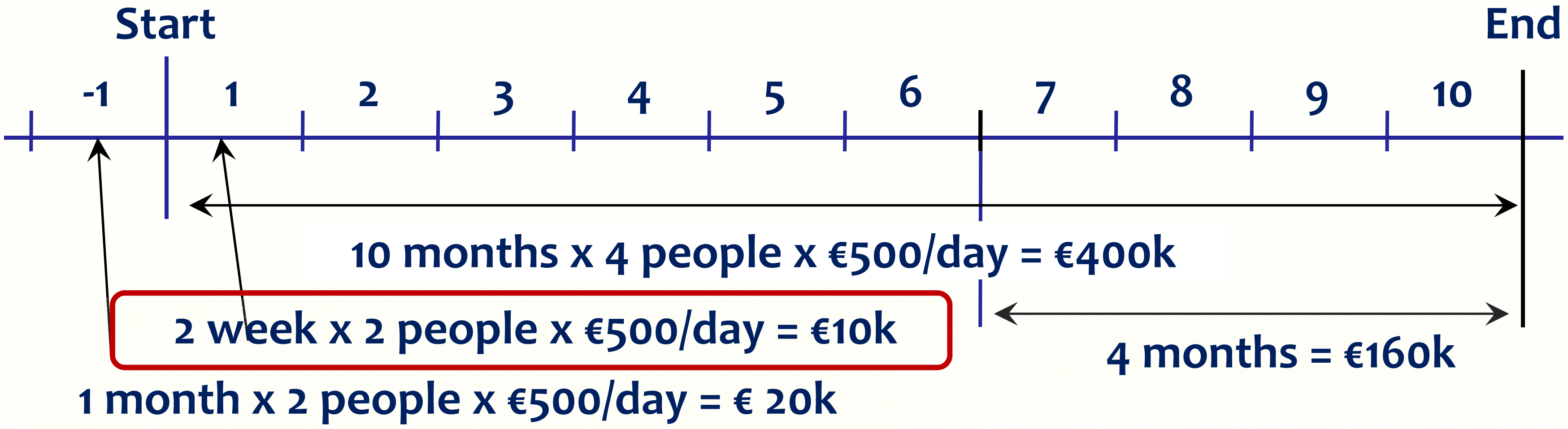
done

This is why project time is usually more important than project budget

Return on Investment (ROI)

+ **Benefit of doing** - huge (otherwise we should do an other project)
– **Cost of doing** - project cost, usually minor compared with other costs
– **Cost of being late** - lost benefit
– **Cost of doing nothing yet** - every day we start later, we finish later

The Cost of Time


Start
End
-1
1
2
3
4
5
6
7
8
9
10
10 months x 4 people x €500/day = €400k
2 week x 2 people x €500/day = €10k
4 months = €160k
1 month x 2 people x €500/day = € 20k

- We can save 4 months by investing €200k → "That's too much !"
- It's a *nicer* solution - Let's do 2 weeks more research on the benefits
- What are the expected revenues when all is done? → €16M/yr (€1.3M/mnd)
- So 2 weeks extra doesn't cost €10k. It costs €16M/26 = €620k
- And saving 4 months brings €16M/3 = €5M extra

➔ Invest that €200k *NOW* and *don't waste time* !

Causes of Delay

- Some typical causes of delay are:
  - Developing the wrong things
  - Unclear requirements
  - Misunderstandings
  - No feedback from stakeholders
  - No adequate planning
  - No adequate communication
  - Doing unnecessary things
  - Doing things less cleverly
  - Waiting (before and during the project)
  - Changing requirements
  - Doing things over
  - Indecisiveness
  - Suppliers
  - Quality of suppliers results
  - No Sense of Urgency
  - Hobbying
  - Political ploys
  - Boss is always right (culture)
- Excuses, excuses: it's always "*them*". How about "*us*" ?
- What are causes of these causes ? (use 5 times 'Why ?')

Causes of causes

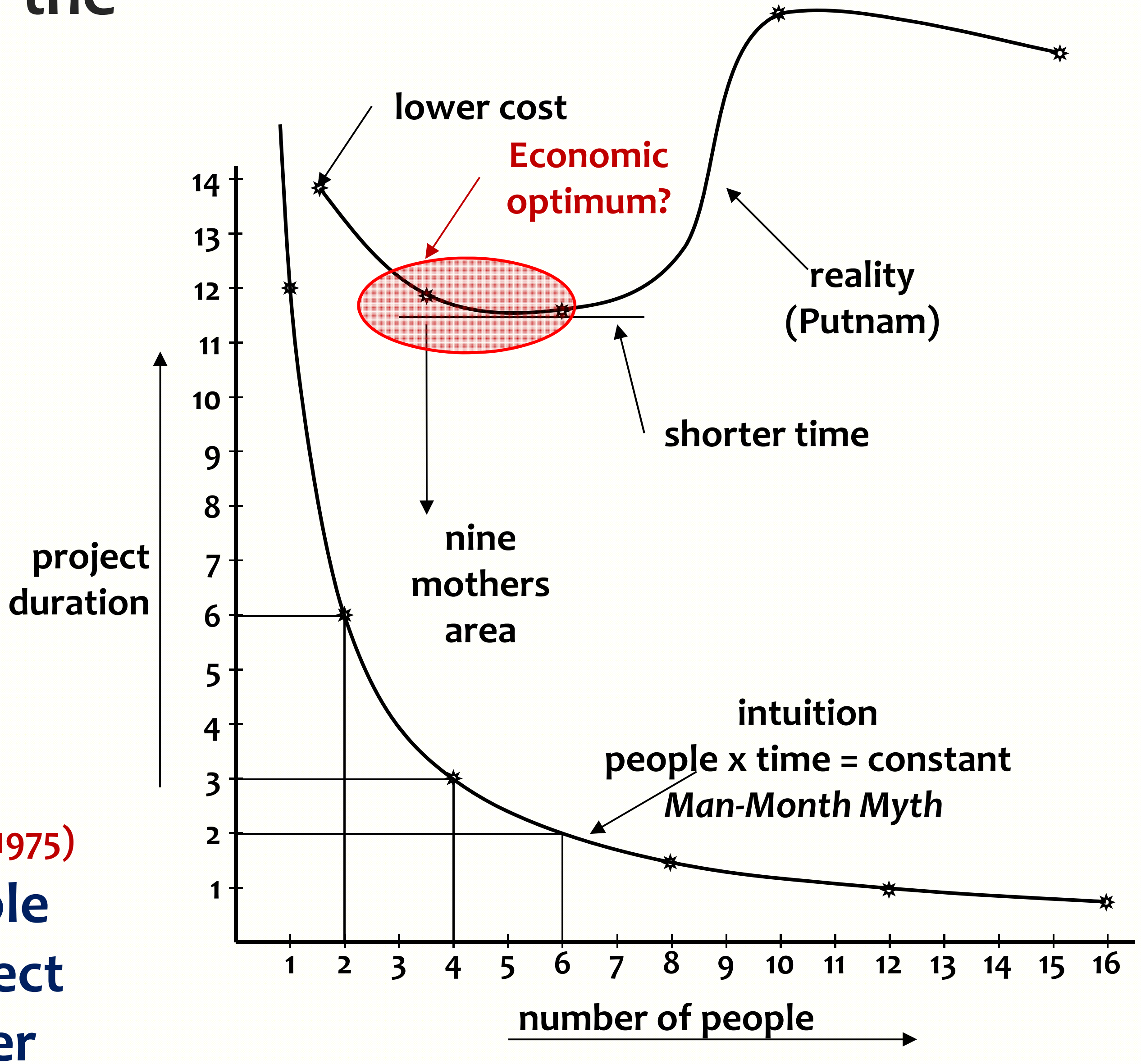
- Management
- No Sense of Urgency
- Uncertainty
- Perceived weakness
- Fear of Failure
- Ignorance
- Incompetence
- Politics
- Indifference
- Perception
- Lack of time
- Not a Zero Defects attitude
- No techniques offered
- No empowerment
- Lack of Discipline
- Intuition

Intuition often points us in the wrong direction

What options do we (seem to) have

- **Deceptive options**
  - **Hoping for the best** (fatalistic)
  - **Going for it** (macho)
  - **Working Overtime** (fooling ourselves and the boss)
  - **Moving the deadline**
    - Parkinson's Law
      - Work expands to fill the time for its completion
    - Student Syndrome
      - Starting as late as possible,
        only when the pressure of the FatalDate is really felt
- **Dangerous** (but sometimes necessary) **option**
  - **Adding people**
    - Beware of Brooks' Law (1975)
      - Adding people to a late project … makes it later

The Myth of the Man-Month



Brooks' Law (1975)

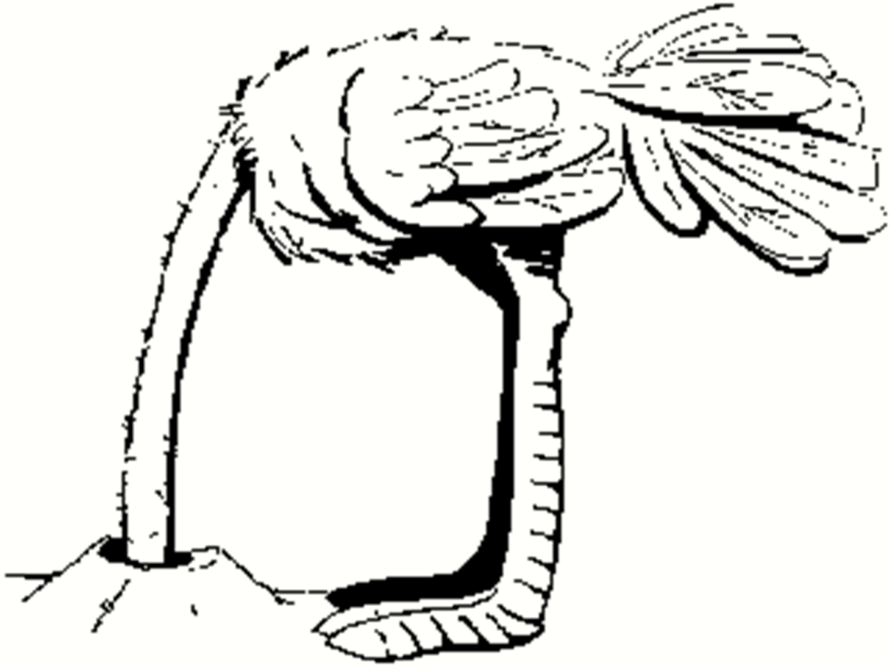
Adding people to a late project makes it later

Saving time

Continuous elimination of waste

We don’t have enough time, but we can save time ***without negatively affecting the Result !***

- **Efficiency in *what* (*why*, for *whom*) we do** - doing the right things
  - *Not* doing what later proves to be superfluous
- **Efficiency in *how* we do it** - doing things differently
  - The product
    - Using proper and most efficient solution,
      instead of the solution we always used
  - The project
    - Doing the same in less time,
      instead of immediately doing it the way we always did
  - Continuous improvement and prevention processes
    - Constantly learning doing things better
      and overcoming bad tendencies
- **Efficiency in *when* we do it** - right time, in the right order
- **TimeBoxing** - much more efficient than FeatureBoxing



The problems in projects are not the real problem,
the real problem is that we don’t do something about it

Do you use Project Evaluations ?

Do you really learn from what happened ?

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

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

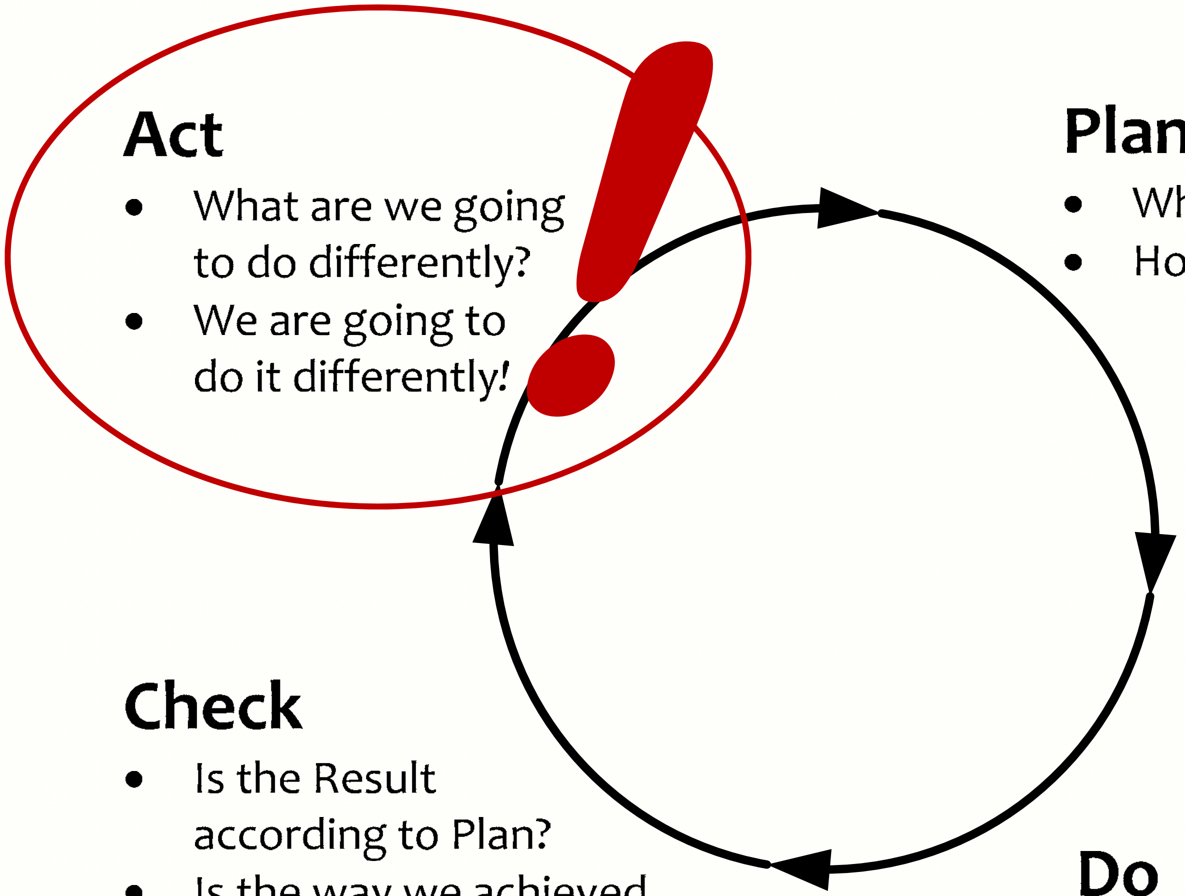
- Hindsight is easy, but reactive
- Foresight is less easy, but proactive
- Reflection is for hindsight and learning
- Preflection is for foresight and prevention

Only with *prevention* we can save precious time

This is used in the Deming or Plan-Do-Check-Act cycle

The essential ingredient: the PDCA Cycle

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



Act

- What are we going to do differently?
- We are going to do it differently!

Plan

- What to achieve
- How to achieve it

Do

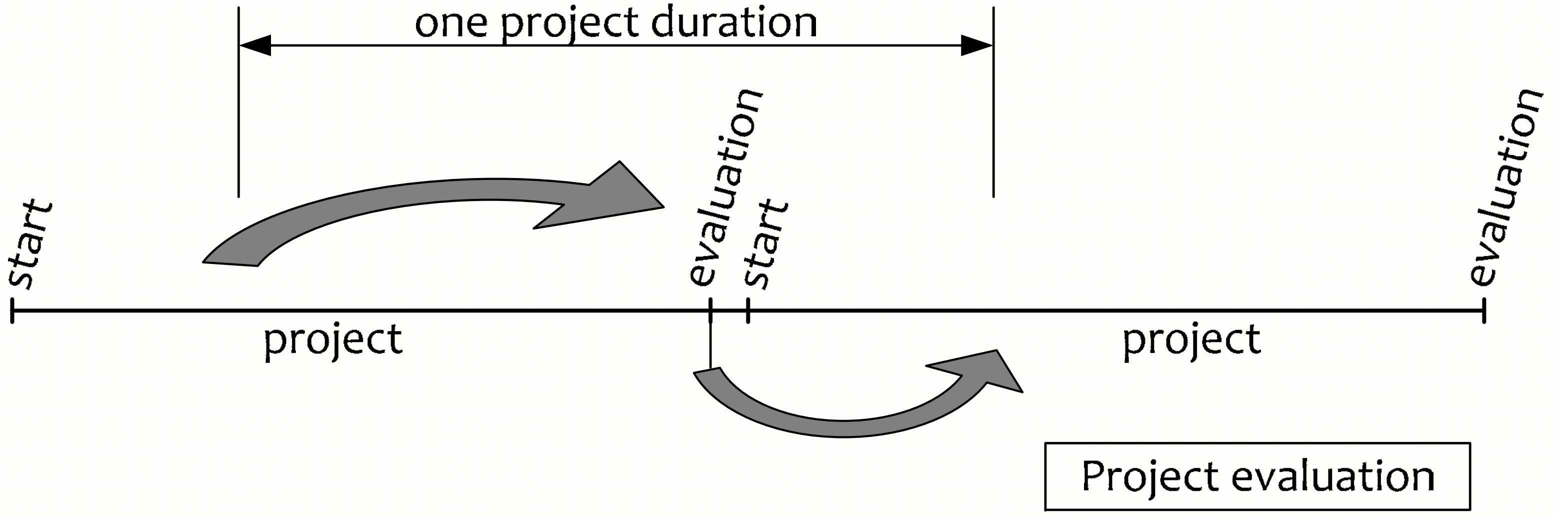
Carry out the Plan

Check

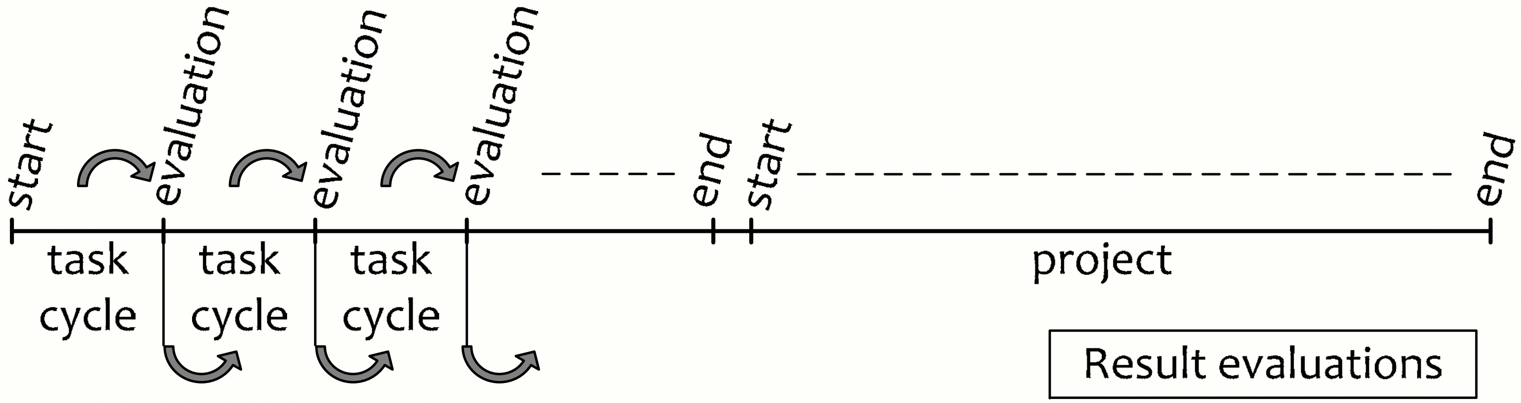
- Is the Result according to Plan?
- Is the way we achieved the Result according to Plan?

Project Evaluations

→ Retrospectives



→ Prespectives



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

Why

What
How much
Are we done

How

Check as early
as possible

Zero
Defects
Attitude

Right Result

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

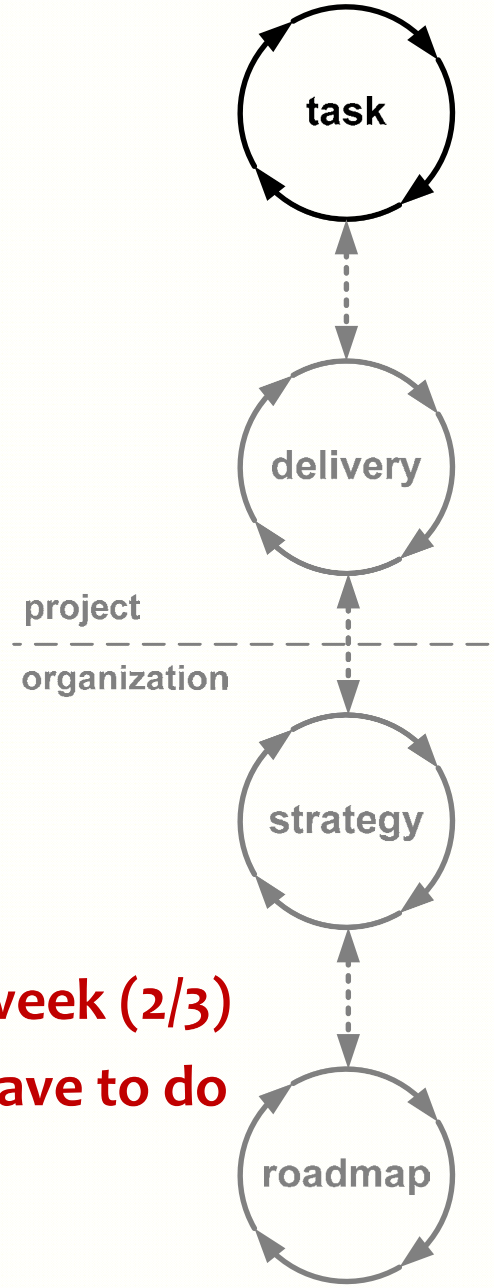
Efficiency
of what we do

Effectiveness
of what we do

What will happen
and what will we
do about it ?

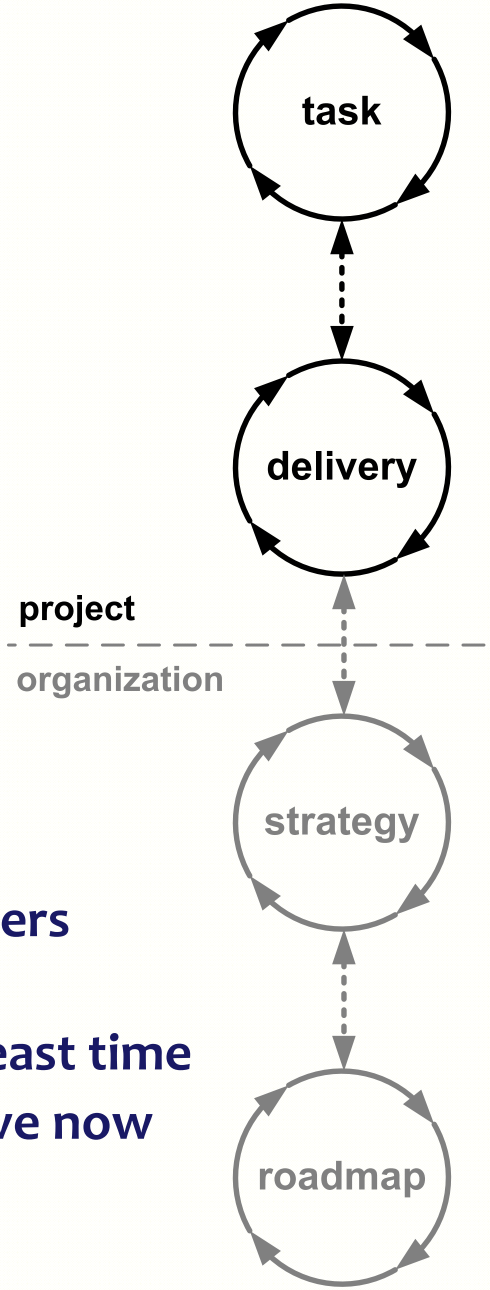
Right Time

Weekly TaskCycle



- Are we *doing* the right things,
  in the right order,
  to the right level of detail for now
- Optimizing estimation, planning and tracking abilities to better predict the future
- Select highest priority tasks, never do any lower priority tasks, never do undefined tasks
- There are only about 26 plannable hours in a week (2/3)
- In the remaining time: do whatever else you have to do
- Tasks are always done, 100% done

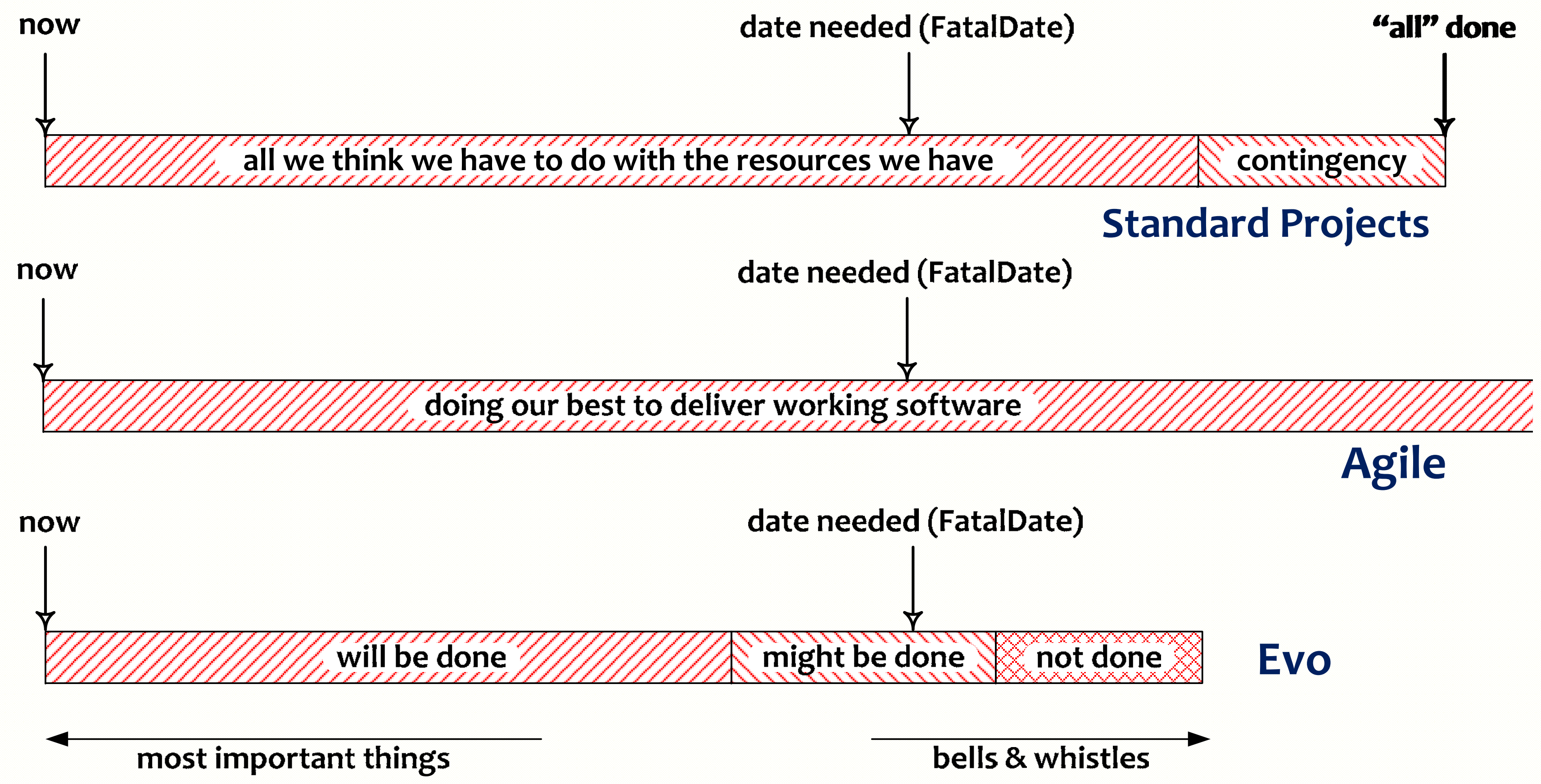
DeliveryCycle



- Are we *delivering*
  the right things, in the right order
  to the right level of detail for now
- Optimizing requirements
  and checking assumptions
  1. What will generate the optimum feedback
  2. We deliver only to eagerly waiting stakeholders
  3. Delivering the juiciest, most important
     stakeholder values that can be made in the least time
  - What will make Stakeholders more productive now
- Not more than 2 weeks (it can be less !)

TimeLine

What the customer wants, he cannot afford



- **Better 80% 100% done, than 100% 80% done**
- **Let it be the most important 80%**

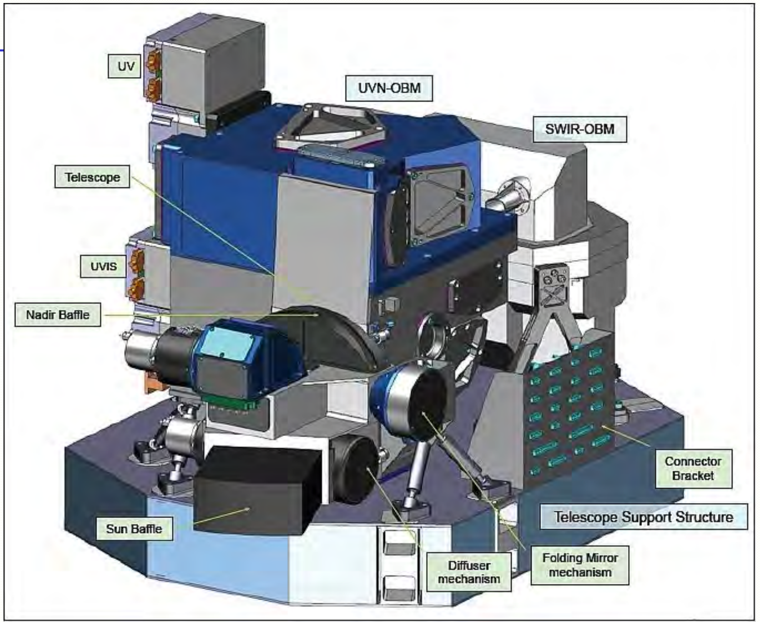
Sorry

Picture removed for confidentiality

Sorry

Picture removed for confidentiality

Earth Observation Instrument



- **Expectation: 1 year late**
  (Missing every deadline)
- **Does it matter if the launch vehicle is also late ?**
- **Requirements were no problem at all**
- **With some coaching: delivered 1 *day early***
- **Now they can claim the time until launch**
- **40 man-year - about €6M saved**

Oscilloscope development

- Delivery 50% faster
  than average overrun over the last 5 years
- Fastest time-to-market,
  highest quality at intro in more than 10 years
- Team won a prestigious Team Award
  as part of the company's
  Technical Excellence recognition program

Example

- Polish software project
  - Deadline in 6 weeks
  - ‘Mission Impossible’
- After reorganizing
  - Delivered in 5 weeks to happy customer
  - No overtime !
- Magic question:
  - What do you have to deliver by the end of the week, and
  - What do you all have to do to achieve that ?

  - Many issues surface immediately !
  - To be solved before causing more problems

Tomorrow 14:45 – 17:00

- Workshop “How to deliver Quality On Time”
  - We have time for some exercises, to get the feeling
- Prepare:
  - The top-3 stakeholders of your project (*Who* is waiting for it?)
  - The top-3 real requirements for your project (What are they waiting for?)
  - How much value improvement do the stakeholders expect (3 or 7?)
  - Any deadlines (No deadlines: it will take longer)
  - What you should and can have achieved in the *coming 10 weeks* (Will you succeed? - Failure is not an option!)
  - What you think you should and can do the *coming week* in order to achieve what you’re supposed to achieve (Make sure not to plan what you shouldn’t or cannot do - At the end of the week everything you planned will be done)
  - Any issues you expect with the above or otherwise with your work

More

www.malotaux.nl/booklets

1 Evolutionary Project Management Methods (2001)
Issues to solve, and first experience with the Evo Planning approach

2 How Quality is Assured by Evolutionary Methods (2004)
After a lot more experience: rather mature Evo Planning process

3 Optimizing the Contribution of Testing to Project Success (2005)
How Testing fits in

3a Optimizing Quality Assurance for Better Results (2005)
Same as Booklet 3, but for non-software projects

4 Controlling Project Risk by Design (2006)
How the Evo approach solves Risk by Design (by process)

5 TimeLine: How to Get and Keep Control over Longer Periods of Time (2007)
Replaced by Booklet 7, except for the step-by-step TimeLine procedure

6 Human Behavior in Projects (APCOSE 2008)
Human Behavioral aspects of Projects

7 How to Achieve the Most Important Requirement (2008)
Planning of longer periods of time, what to do if you don't have enough time

8 Help ! We have a QA Problem ! (2009)
Use of TimeLine technique: How we solved a 6 month backlog in 9 weeks

RS Measurable Value with Agile (Ryan Shriver - 2009)
Use of Evo Requirements and Prioritizing principles

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Inspection pages

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