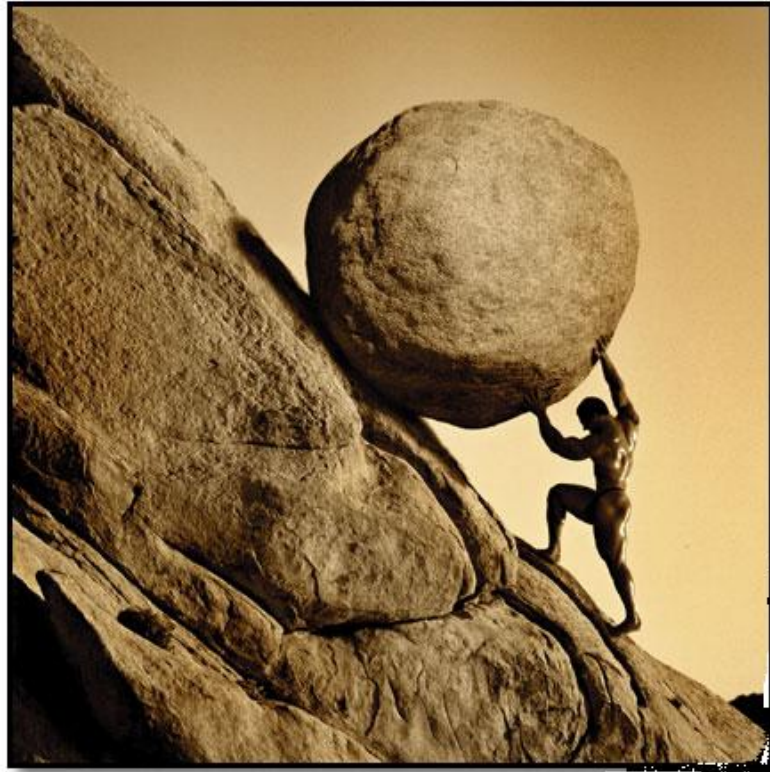# Sisyphus and Project Management

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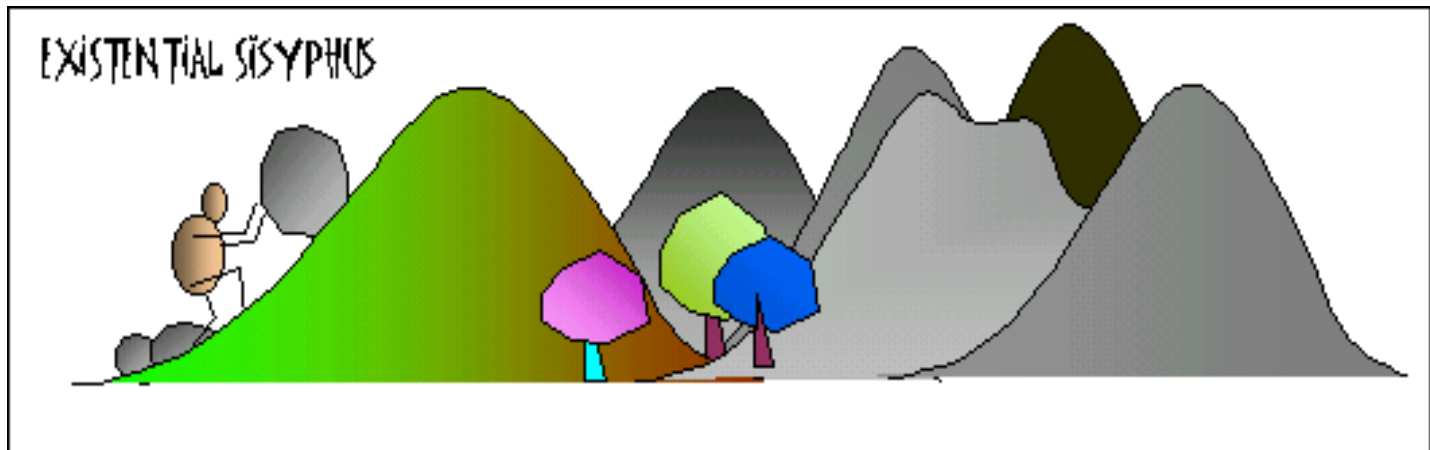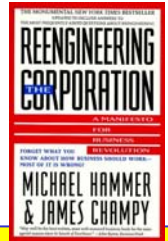
Agenda

- Part One: "*Rolling the Boulder Up the Mountain*" or "*Reaching the Pinnacle of Project Success*" K. Lehtonen

- Part Two: "*Watching the Boulder Tumble Back Down the Mountain*" or "*The light at the end of the tunnel IS an approaching train*" L. Barrett

EXISTENTIAL SISYPHUS

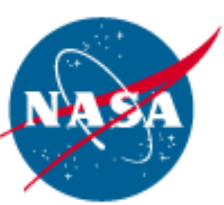# The s-t-r-e-t-c-h goals of the Hubble Space Telescope reengineering project were to:

- Produce a single, integrated system for spacecraft control and monitoring
- Develop a strong architecture to enhance system maintainability and extensibility
- Increase significantly the automation of routine functions
- Support a geographically distributed user community in a secure manner
- Reduce the costs of operating and maintaining the system by at least 50%
- ★ Employ *radical* approaches, where appropriate, to the development and ___management___ of the project

NOTE: *The Project team that I led eventually comprised over 150 people from 15 different companies and NASA civil servants.*
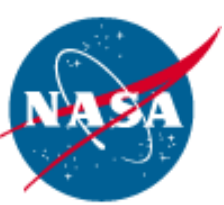
What I found upon arriving at the scene…the news is not good ("here's another fine mess…")

"Project Floundering"

- **Lack of team cohesion or recognizable "culture"**
- **Lack of clarity and purpose—project was limping along**
- **High attrition >25%…low morale**
- **Consultant running the day-to-day activities (weak Gov't on-site management)**
- **Lack of any obvious project structure (no WBS or schedule)**
- **Lack of methods and processes**
- **Lack of trained staff in the O-O methodology**
- **"Unrelated" prototyping activities being conducted**

"Rolling the Boulder Up the Mountain"

- **Promoted concept of "badgeless" team**

- **Initiated ambitious training schedule for staff**

- **Selected a Release Manager for the first major release of software**

- **Developed a WBS and associated schedule and met with stakeholders to receive final "go-ahead"**

- **Created a tight-knit community of excellence ("a place where everyone knows your name")**

"Everything really interesting that happens in software projects eventually comes down to people."

-James Bach

Made conscious effort to recognize the needs and accomplishments of others

- I held bi-weekly barbecues in the summer/fall of 1996 to recognize the need for a "sense of community" and purpose, and to stress teamwork and camaraderie

"'Us and them' became 'we'"

- *Kudos Bar Effect*: I personally delivered a Kudos candy bar to each member of the Release Team upon successful completion of each major software delivery


"Fame and renown resulting from an act or achievement"

Then, a miracle occurs here…

- While sitting at my desk one morning in September 1996, I began to listen to the 'hum' and to feel the 'pulse' and 'energy' in the hallways and outer corridors, and then I experienced a "flash of sudden awareness" that from this point onward, we would succeed … everything had magically come together.
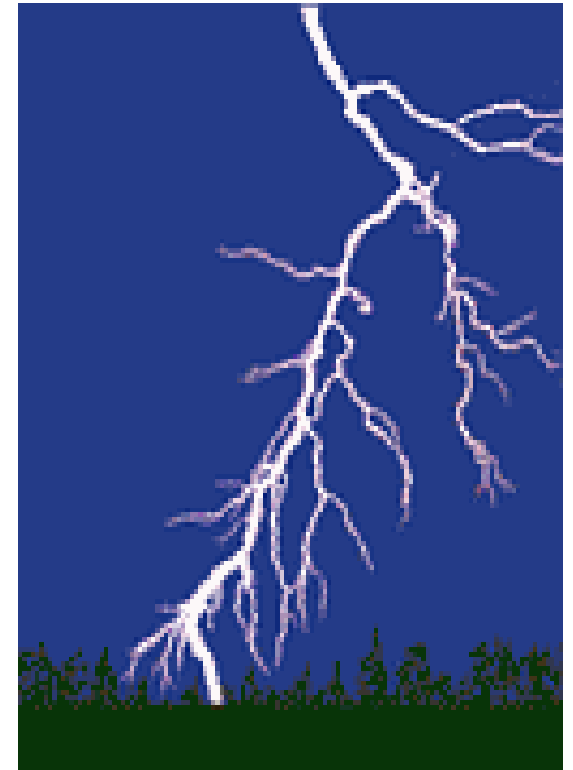
Satori: Inner Recognition

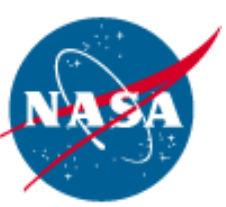# "WOW(!) I wouldn't have believed this when I first joined the project!"
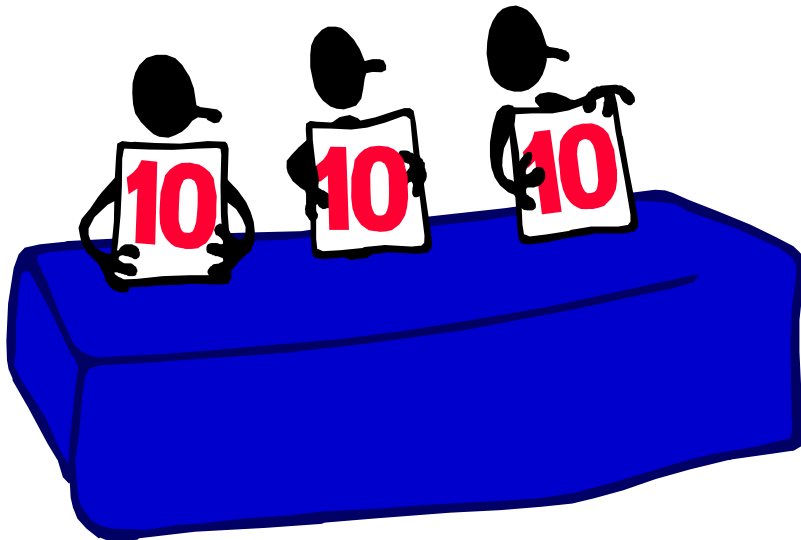
- One Million+ Lines of Code
- Five Major Releases
- Productivity: 3-5 Times Industry Average
- Defect Metrics: 1/3rd Acceptable Range
- Low Attrition Rate: 4%
- High Octane Team

"No good deed goes unpunished!"

(Despite the apparent success of the project, I was replaced in August of 1998….)
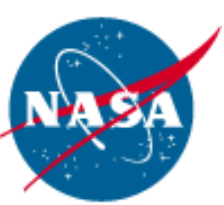

To Be Continued…Part Two
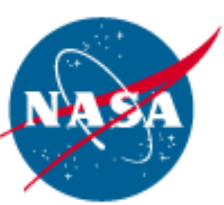
What goes up …

- I have watched over the last few years as an exceptional, highly productive team gradually transitioned to 'adequate'
- Many of the features that enabled high productivity and morale were incrementally eliminated
- Unlike Sisyphus's boulder, the descent was so gradual that it effectively went unnoticed

Creating a Vacuum

- A vacuum is created by the promotion of the major stakeholders as a reward for their success
- We discovered that the new leadership had slightly different goals from those of their predecessors
  - This results in a less focused approach to project leadership
  - Multiple competing subgroups begin to form in the wake of this change
- The internal structure of the project began to align itself more with the new apparent external structure
  - Communication within the project began to fragment as a result; left and right hands didn't always talk
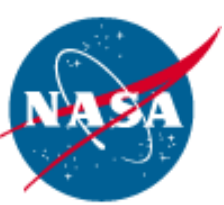
Resistance is Futile

- As the organization became more visible, it began to be viewed as a task-able resource by the new leadership
  - The team's individual identify begins to erode as it is assimilated into the larger organization
  - Highly productive environment was impacted as concurrent tasking from multiple 'customers' stimulated resource conflicts

- I saw this transition as comparable to watching someone start taking pieces out of a jigsaw puzzle that was almost completed
- It turned out that these were just the first set of incremental changes that would continue to impact the productivity and morale of the project

Take Me to Your Leader

- Contractor installed as Project Manager
  - This began the departure from the more radical 'badgeless society'
  - Flat management structure transitioned into a more complex and classical organization

- The Project Manager installed team leads that were mostly from his own organization
  - Creativity abates as the organization's diversity is impacted by the need to RIF staff to meet budget constraints
 - Staff morale impacted as social events are curtailed

You get what you pay for

- Economics becomes driving factor on project
  - Award Fee milestones define short term goals
  - Corporate objectives become a factor in the management of the project
  - Customer satisfaction is defined over award fee period versus product-by-product (less granularity)

- Reward for success is redefined
  - Bonuses for exceptional personal performance is replaced with award fee at corporate level
  - Problem resolution begins to focus on sourcing the problem and less on process improvement
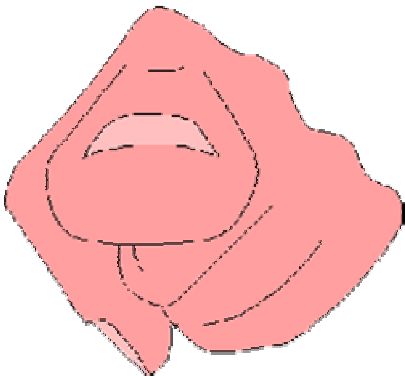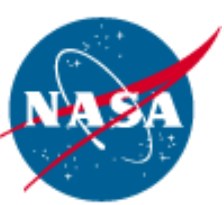
Doing More with Less

- Work and staff do not reduce proportionally
  - I am seeing the staff become overtaxed as they 'thrash' between tasks
    - Responsiveness to problems is diminished
    - Level of peer error-checking diminished from higher workload
    - Staff burnout more likely
- Search for the problem
  - Meetings begin to find cause of lowered productivity
  - Process improvement exercises impact already taxed resources

Wherever you go …

- **There You Are!**
  - I have watched as a highly productive, and satisfying team environment has transitioned into adequacy
  - Small, incremental changes have a larger than expected impact
    - Replacement stakeholders lacked an overriding common goal
    - Corporate goals become drivers in some areas of the project
    - Expectations grow even as capabilities are reduced
  - Team morale seems to suffer the most
- "Nothing endures but change"
  - **Heraclitus (~500 BC)**