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Why Projects Fail

And How to Prevent It

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Projects Fail Because of..

Too many missing requirements

Lack of attention to efficiency and speed

Lack of accountability for failure

IMAGINE...if you don't need to

Make scope changes

Change requirements frequently

and not

***Fight the system of cost and
schedule***

FORD did that... 1995 Lincoln Continental

- **Avoided over 700 requirements changes**
- **Finished 4 months ahead of schedule**
- **Reduced production budget from 90M to 30M**

How?

Avoided Myopia in Project management

***-avoided costly
requirements
creeps***

Myopia managers

Focus on fire fighting

Pay attention to cost and schedule, but insufficient attention to the quality of the delivered product

They fail to see that.....

**Over 60 percent
requirements
are usually missing,
incomplete or vague**

They fail to understand that...

**Over 71% software projects fail
from poor requirements
management**

(greater than bad technology!)

Managing Requirements

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graph TD; MR[Managing Requirements] --- SU[Sufficient Understanding of the system]; MR --- CR[Comprehensive risk capture]; MR --- DT[Divergent thinking]; MR --- TSPR[Time Sensitive Project Reviews]; MR --- CU[Consensus with understanding]; MR --- CB[Convergent brainstorming]; MR --- NRA[Negative Requirements analysis];
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Sufficient Understanding of the system

Comprehensive risk capture

Divergent thinking

Time Sensitive Project Reviews

Consensus with understanding

Convergent brainstorming

Negative Requirements analysis

Sufficient Understanding of the System

- **Knowledge of system vulnerability**
- **Use and misuse**
- **Knowledge of variation in performance**
- **Knowledge of “Never Events”**

Comprehensive Risk Capture

Known risks

– *from data, lessons learned*

Unknown risks

– *from formal analyses*

Unknown-unknown risks

- *unknown to management
but known to employees,
tech support personnel, users,
and other stakeholders*

To capture all risks

Need open environment

- **Every cross function must participate from their view**
- ***No one is left out because of lack of consensus***

Why?

- **Avoid oversights and omissions**
- **Avoid Groupthink**

Time Sensitive Project Reviews

Preliminary Project Review

Subsystems Project Review

Critical Project Review

CONSENSUS WITH UNDERSTANDING.....

Say No
to Yes Men!

Why Negative Requirements Analysis?

***Customer does not
know
what is needed until
the system is broken***

Negative Requirements Analysis

Assume every milestone is going to be a failure

Mitigation requirements

- **Control the risk**
- **Avoid the risk**
- **Failsafe the risk**
- **Warn early**

Gaining Efficiency and Speed....

**Going at high speed
without doing the right
things is dangerous!**

**Working hard won't help
if you are working on
wrong things!**

What are the Right Things?

**Requirements
comprehensiveness prior to
budgeting**

**Master schedule with
modularized paths**

**A tool to monitor speed and
efficiency**

HOW?

Self organizing teams

Team building

**Report accountability
violations**

Accountability

Requirements accountability

Accountability for efficiency

Microsystems accountability

Project Manager accountability

Requirements accountability

Independent Assessment
of requirements

Checklists

Accountability for efficiency

Automate efficiency

**Have a proactive tool
to alert and warn**

Microsystems accountability

Self organizing teams

With clear responsibility

**Example: Andon system
at Toyota**

Project Manager accountability

- Independent verification and validation of work**
- Long term accountability**
- Accountability to customers**

Long Term Accountability Example

Requirement: The Challenger shuttle shall not be launched when temperature is below 40

Q: Why not?

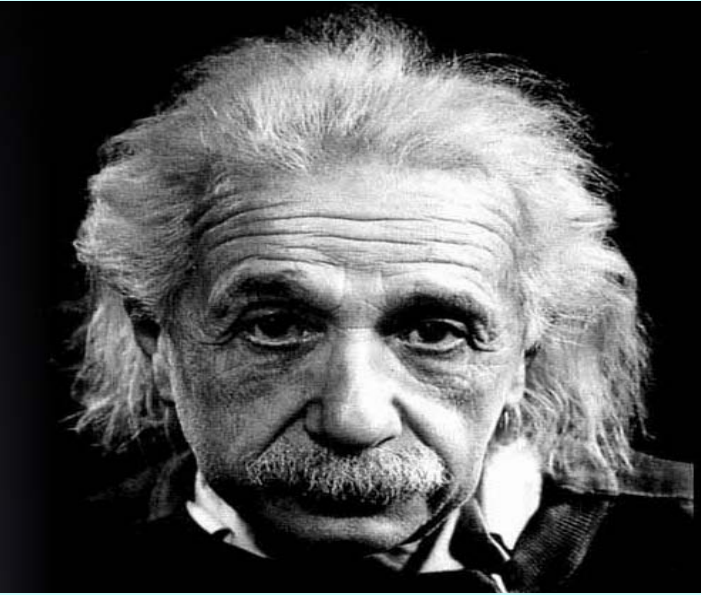
A: The seal freezes

Q: Can we require the seal that does not freeze?

Accountability to Customers

**Let Disney Run
Your Project**

The equation is simple:



Project Excellence

= Flawless Requirements

+

Efficiency Monitoring Tool

+

Delighted Customer