Key Characteristics of innovative organizations

Joint panel: InnoCentive, TopCoder, NASA

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#COECI

Ask questions, we answer (real-time)

Tweet via **#COECI**

OR

Write it on paper, put paper in box.

We'll pose your questions anonymously; you can chime in if you want to be known.

Agenda for session

Introduction

Example

FAQ – Panel

Speaker's Corner activity

Closing remarks

Timing

Introduction (5 min) [Shapiro]

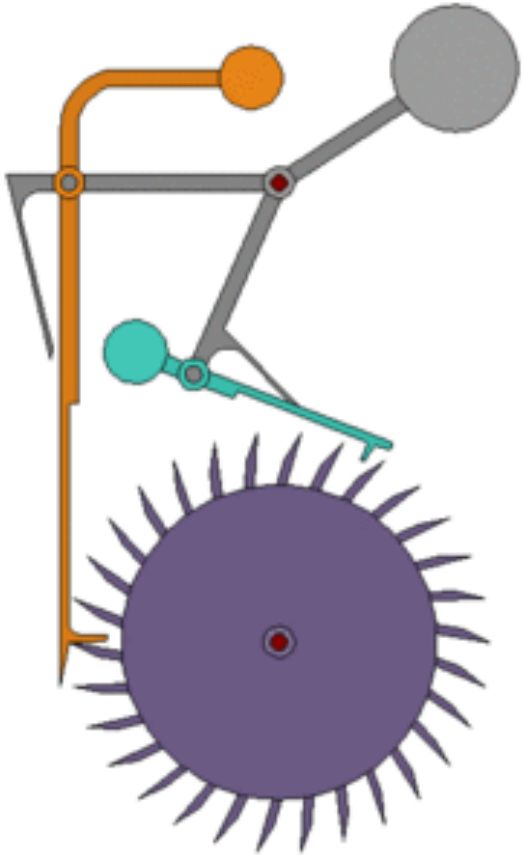
An example (20 min) [Kuster]

Rapid-fire FAQ (15 min) [Panel]

Speaker's Corner

- How it works (5 min) [Shapiro]
- Go to 4 corners (35 min)
- Debrief each corner (3 min per = 20 min total)

Closing remarks (5 min) [Shapiro]



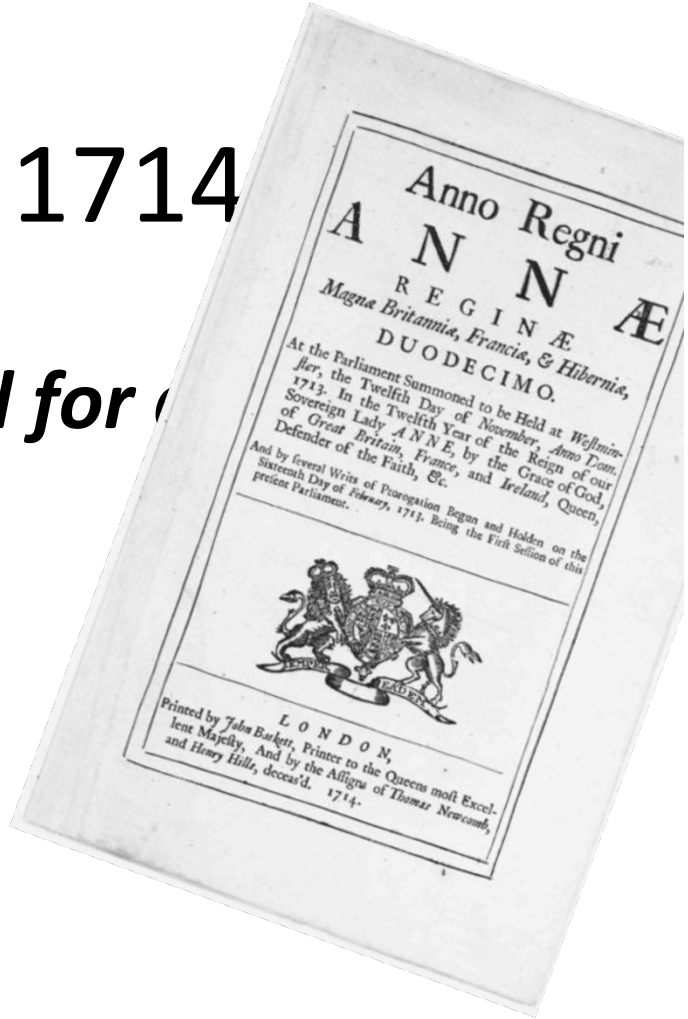
Grasshopper escapement

Scilly disaster of 1707

Longitude mistake → wrong side of Channel = huge loss

Longitude Act of 1714

A "practical and useful" method for determine longitude at sea



Anno Regni

A N N Æ

REGINÆ

Magnæ Britanniæ, Franciæ, & Hiberniæ,

DUODECIMO.

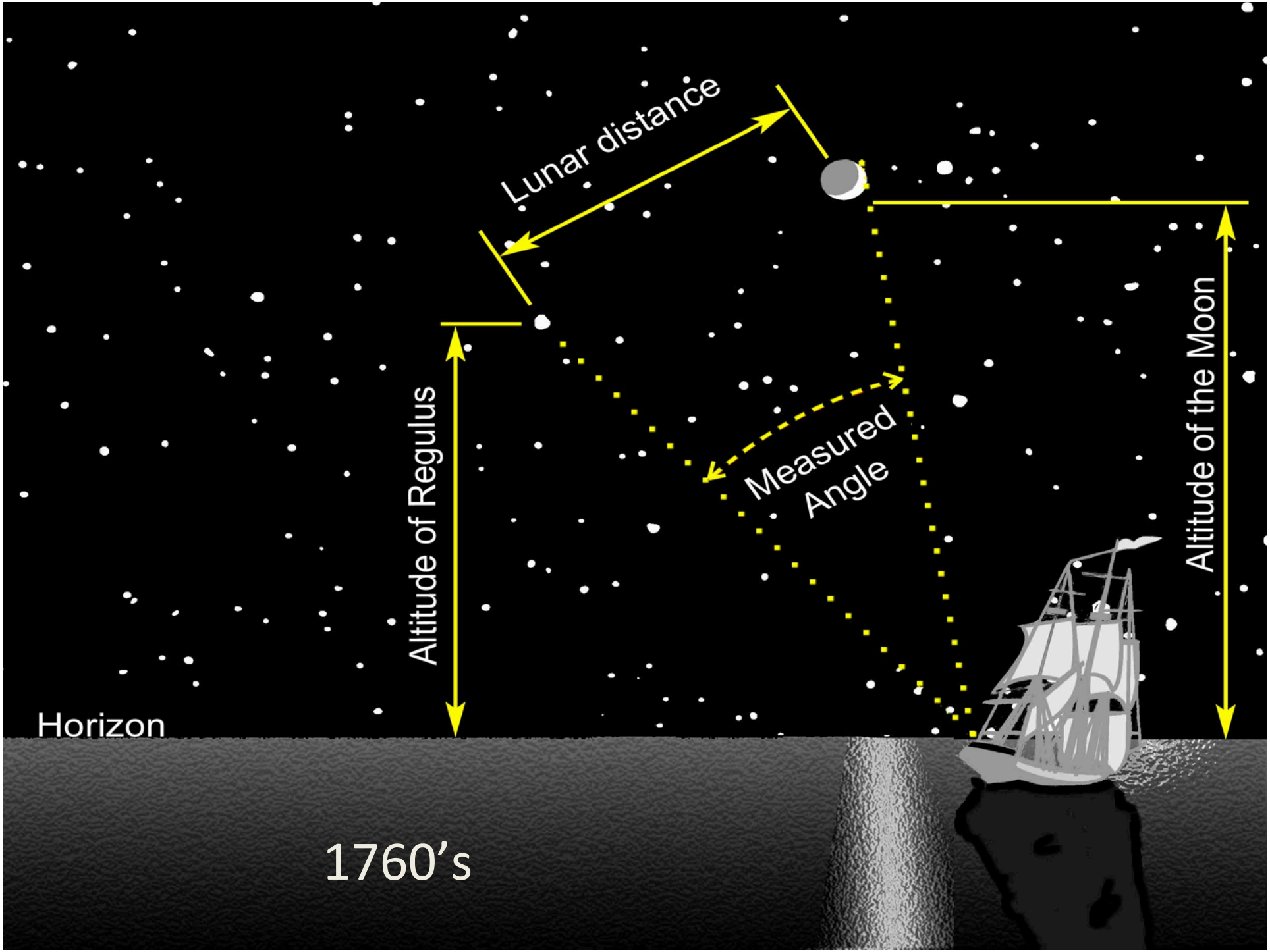
At the Parliament Summoned to be Held at *Westminster*, the Twelfth Day of *November*, *Anno Dom.* 1713. In the Twelfth Year of the Reign of our Sovereign Lady *ANNE*, by the Grace of God, of *Great Britain*, *France*, and *Ireland*, Queen, Defender of the Faith, &c.

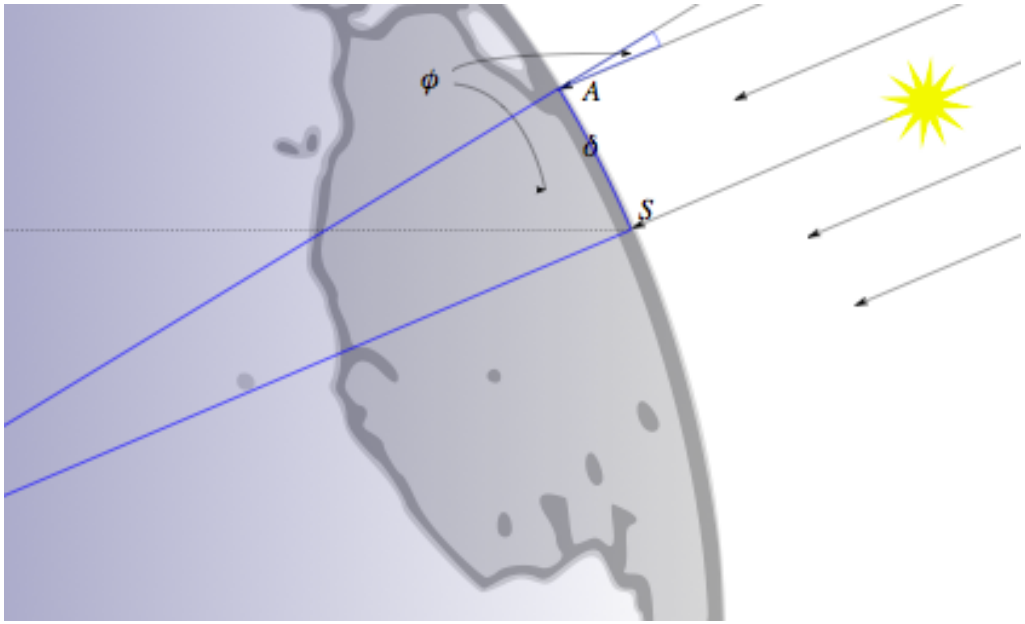
And by several Writs of Prorogation Began and Holden on the Sixteenth Day of *February*, 1713. Being the First Session of this present Parliament.

LONDON,

Printed by *John Barkett*, Printer to the Queens most Excellent Majesty, And by the Assigns of *Thomas Newcomb*, and *Henry Hills*, deceas'd. 1714.

£10,000 for accuracy to 60 nautical miles (111 km)


Lunar distance
Altitude of Regulus
Measured Angle
Altitude of the Moon
Horizon
1760's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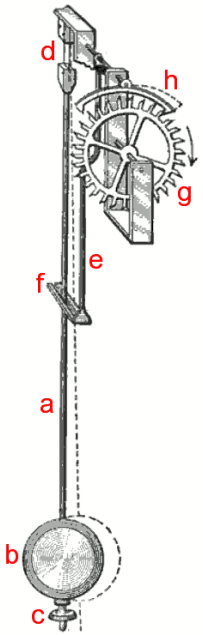
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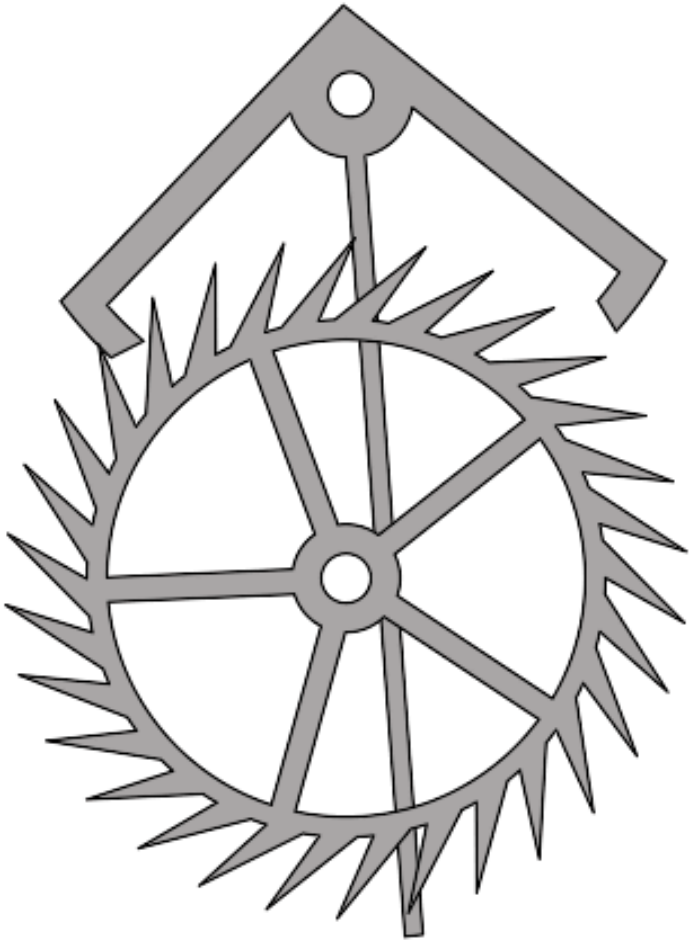
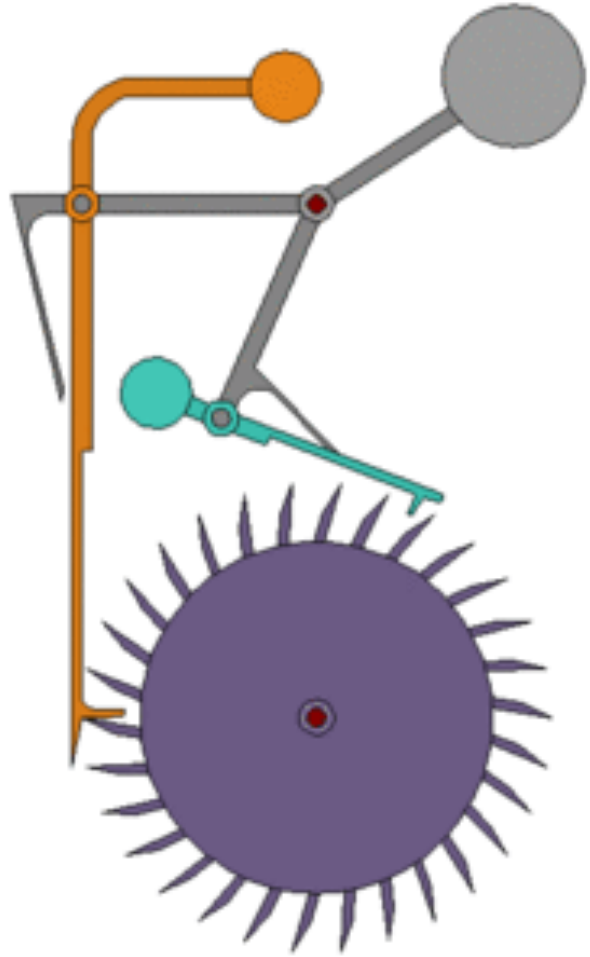
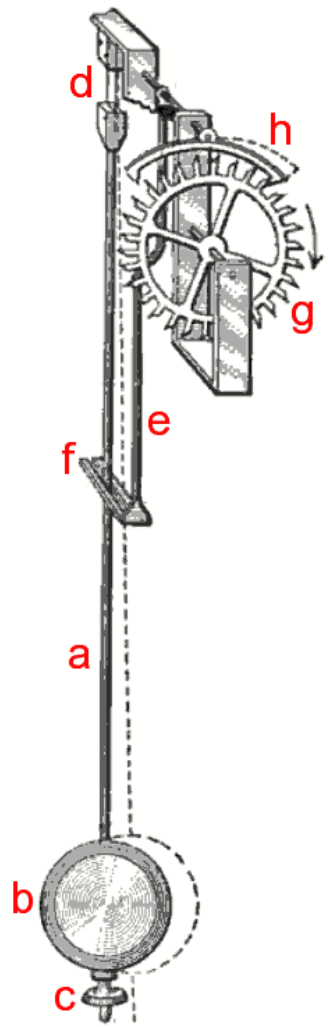
Deadbeat escapement







Grasshopper escapement

People & Organizations

Anno Regni
ANNÆ
REGINÆ
Magnæ Britanniæ, Franciæ, & Hiberniæ,
DUODECIMO.

Theoretical idea

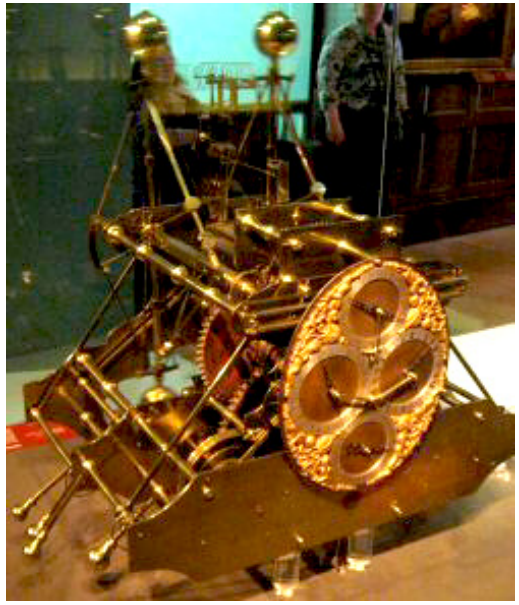
(better escapement)

Submitted description & drawings

Fancy materials = expensive prototype

Mentor/investor = George Graham

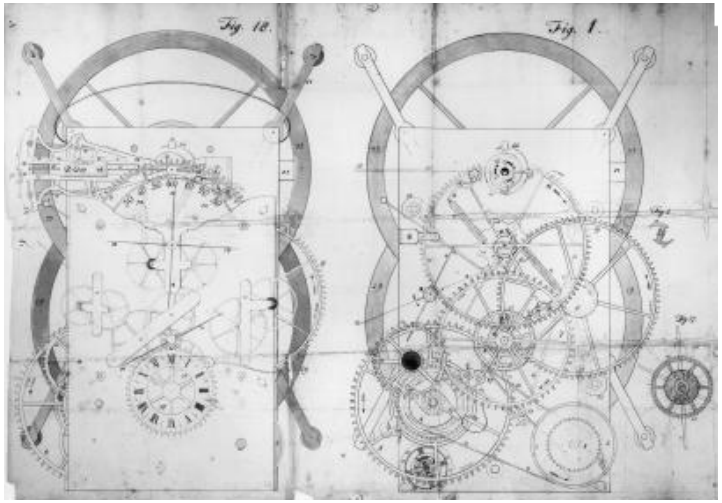
Prototype & test!

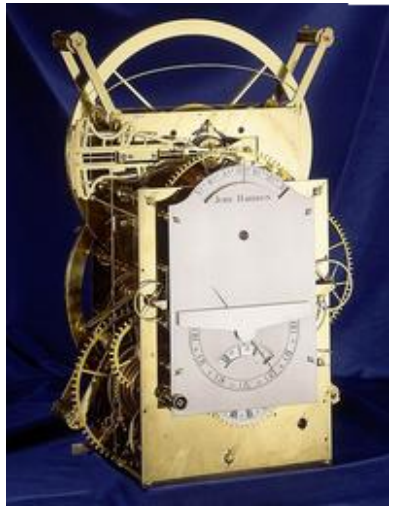


H1: first sea trial (Lisbon, 1735)

H2: war (1741)

H3-H4-K1: politics (1772)





Lessons learned…

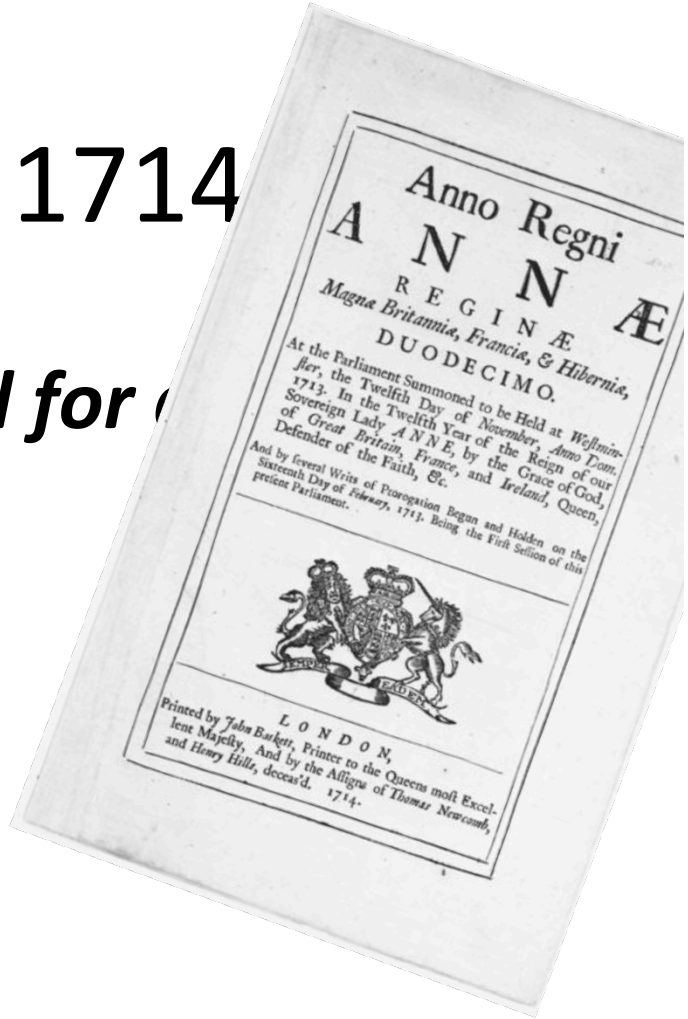
The Longitude prize wasn't very efficient

- Big audacious goal vs. phases
- Solved, but not paid
- Limited population
- 50+ years to solution

"If we build it"…

Longitude Act of 1714

A "practical and useful" method for determine longitude at sea



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Sometimes truth is evident…

…and sometimes the establishment blocks an outside idea

Experts *know* the lunar method is the clear answer (incremental innovation)

…and force opponents to give it a chance

Change is unavoidable

- Politics (War of Austrian Succession)
- Funding
- Management
- People/Organizational
- Changing success criteria (bad)

Myth of the heroic innovator

John Harrison

+ Parliament (Challenger)

+ Halley (matchmaker)

+ Graham (mentor & investor)

+ sons & protégés

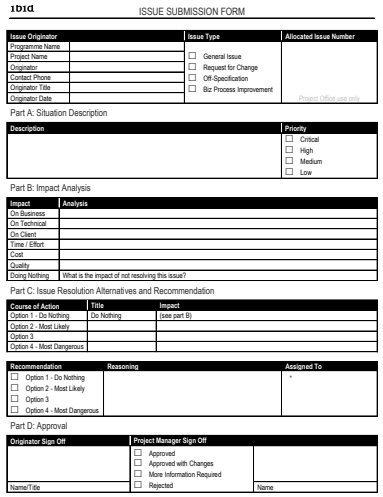
+ captains (field test/feedback)

+ Maskelyne (vocal opponent)

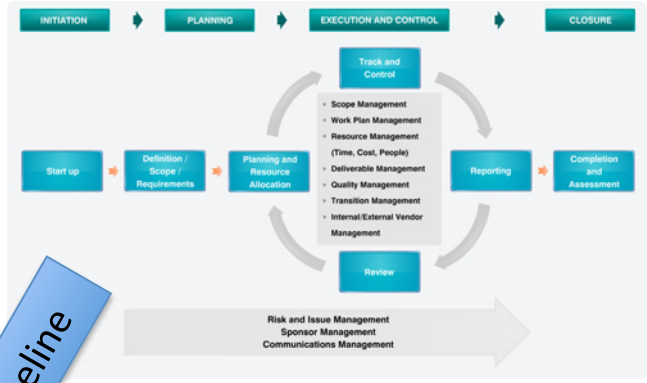
What does your ecosystem of problems/opportunities look like?

Technical Solution / Market or Customer	Uses our existing product/ operation/ technology	Product/operation/ technology is new to us but exists externally	Product/operation/ technology is totally new to us
Sells into existing market/customer, one we are familiar with	Low Risk Overall	Moderate Risk: Moderate Technical Risk; Low Market Risk	High Risk: High Technical Risk; Low Market Risk
Sells into a new market/customer, but one we are familiar with	Moderate Risk: Low Technical Risk; Moderate Market Risk	Moderate-High Risk Overall	Very High Risk: High Technical Risk; Moderate Market Risk
Sells into a new and unfamiliar market/customer for us	High Risk: Low Technical Risk; High Market Risk	Very High Risk: Moderate Technical Risk; High Market Risk	Exceptionally High Risk Overall

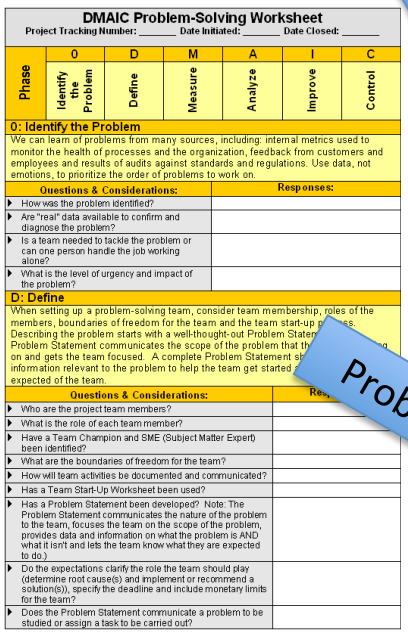
PLM Risk Management



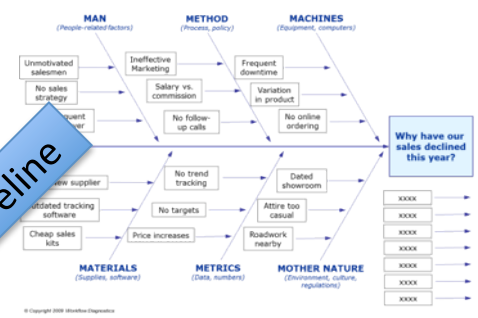
PLM Issue Management



Portfolio Resource Management



Six Sigma Problem Solving



Quality Management

Risk Pipeline

Opportunity Pipeline

Issue Pipeline

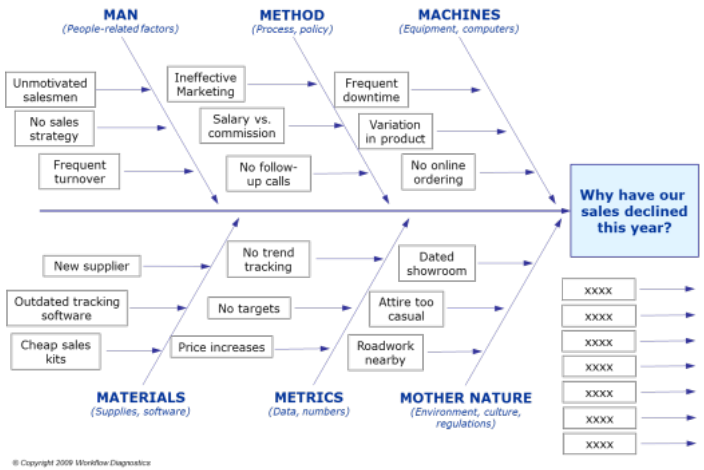
Problem Pipeline

Problem Pipeline

"Captive problems"

Key aspects to get you started today…

Strategy/Process



Culture

Organization

Rapid-fire Q&A panel

Steve seeds rapid-fire FAQ panel, then transition to Speaker's Corner

Strategy/Process

1. How to find good Challenges? How to define success criteria?
2. Do timeline expectations change for Challenge format vs. project format?
3. How to engage a community of heterogeneous skills? How to determine which community is best fit for a given problem?
4. Can you scope a big problem into a series of incremental Challenges? What does that look like? How to balance granularity of the problem?
5. How does IP flow through a Challenge?

Culture

1. Myth of the big bait or wide net vs. focused search
2. Do you encounter a culture of "not invented here" and what can be done about that?
3. What are good ways to incentivize open innovation behaviors?
4. Don't you worry about failure/uncertainty? How manage risk?

Organization

1. Is there a difference between innovative outcomes and innovative organizations?
2. What kind of executive backing is needed?
3. How can different people (at different pay grades) engage the process?
4. Leveraging of early adopters
5. What teams do I need to support? (legal, HR, accounting, etc.)
6. What are some effective ways to get the word out?

Chances are good that CoE can help you with anything that is causing anxiety…including referring you to some other person/organization that has experience with those issues. Don't be afraid to ask!

Speaker's corner activity

Culture
How to kick-start engagement?
Building grass-roots support, etc.

Wild card
Any topic, any question

Organization
Getting buy-in & support from executives

Strategy & Process
Alignment with goals/objectives
Re-evaluating internal innovation processes