

◀ Have we lost our way with Controls

◀ Steve Elliott

◀ Outline

- ▶ Introduction
- ▶ A simple view of Project Controls
- ▶ What is success for Project Controls
- ▶ Have we lost our way? – some observations
- ▶ Summary & Conclusion
- ▶ Discussion

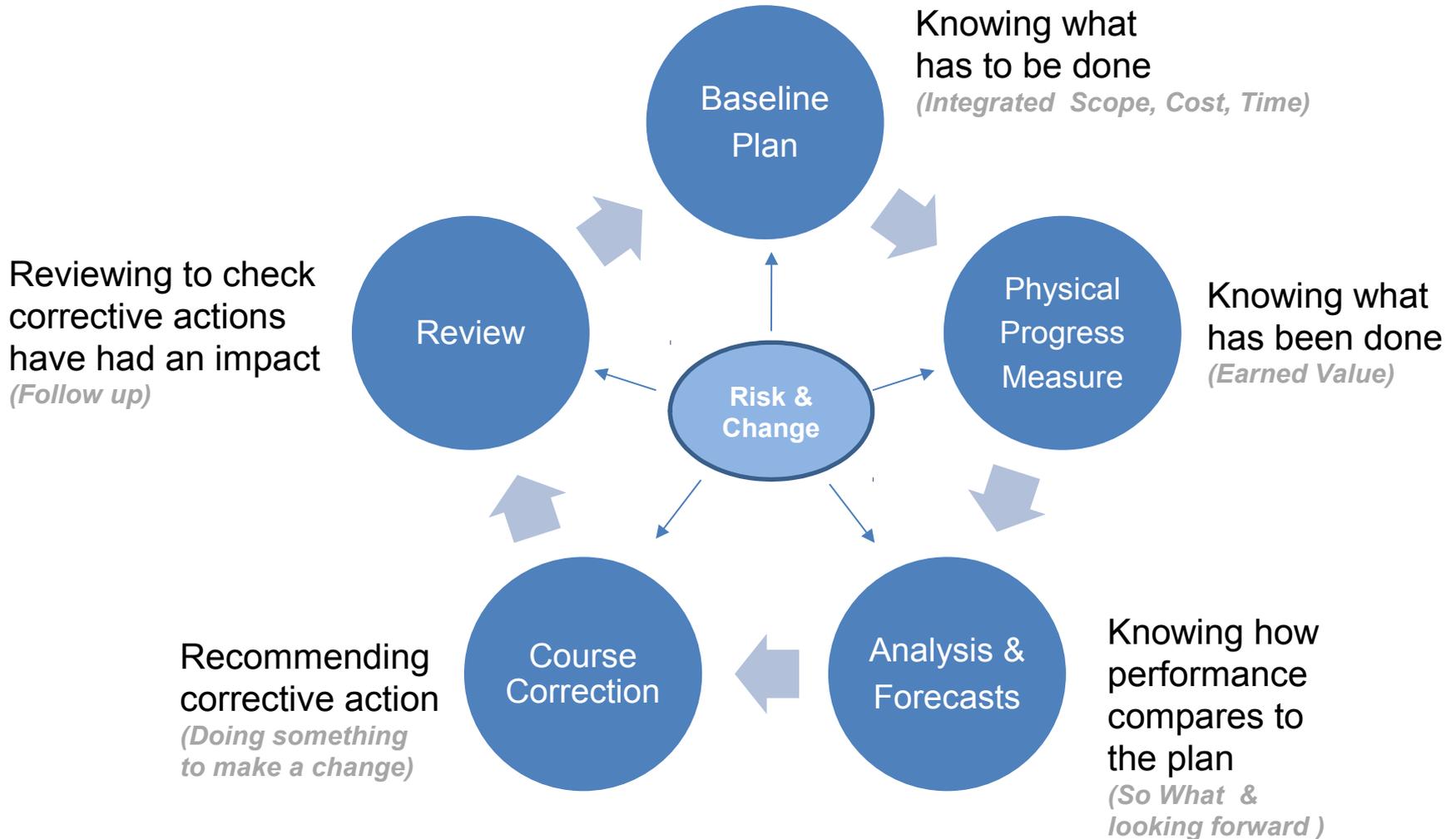
◀ Introduction

- ▶ Over 30 years in engineering & construction projects
- ▶ Chartered Engineer & Certificated PM – FIMechE, FAPM
- ▶ First experience of Project Controls in Petrochem with Exxon/Esso
- ▶ Project Experience
 - Heavy Engineering & Power, Oil & Gas, Petrochem, Pharmaceuticals
 - Infrastructure (Airports, Rail, Water)
 - Worked for contractor, consultant and client organisations
- ▶ Last 2 years - Programme Controls Director at Crossrail

◀ What is Project Controls – a simple view

- ▶ We cannot change the past
- ▶ It's too late to change the present
- ▶ So we are only left **with the future**
- ▶ Isn't that what Controls is really about ?

◀ What is Project Controls – a simple view



◀ What is **success** for Project Controls

- ▶ Knowing what has to be done – the plan
- ▶ Understanding the risks and opportunities in that plan
- ▶ Knowing what has been done
- ▶ Knowing what has NOT been done and why
- ▶ Knowing how performance compares to the plan
- ▶ Recommending corrective action to achieve the plan
- ▶ Communicating - at the right time, in the right format

All at an APPROPRIATE level of detail

◀ The IDEAL Scope of Project Controls

- ▶ Scope Management
 - ▶ Cost Management
 - ▶ Schedule Management
 - ▶ Risk Management
 - ▶ Change Management
 - ▶ Reporting
 - ▶ Contract Management)
 - ▶ Information Management)
- Understand why others exclude these*

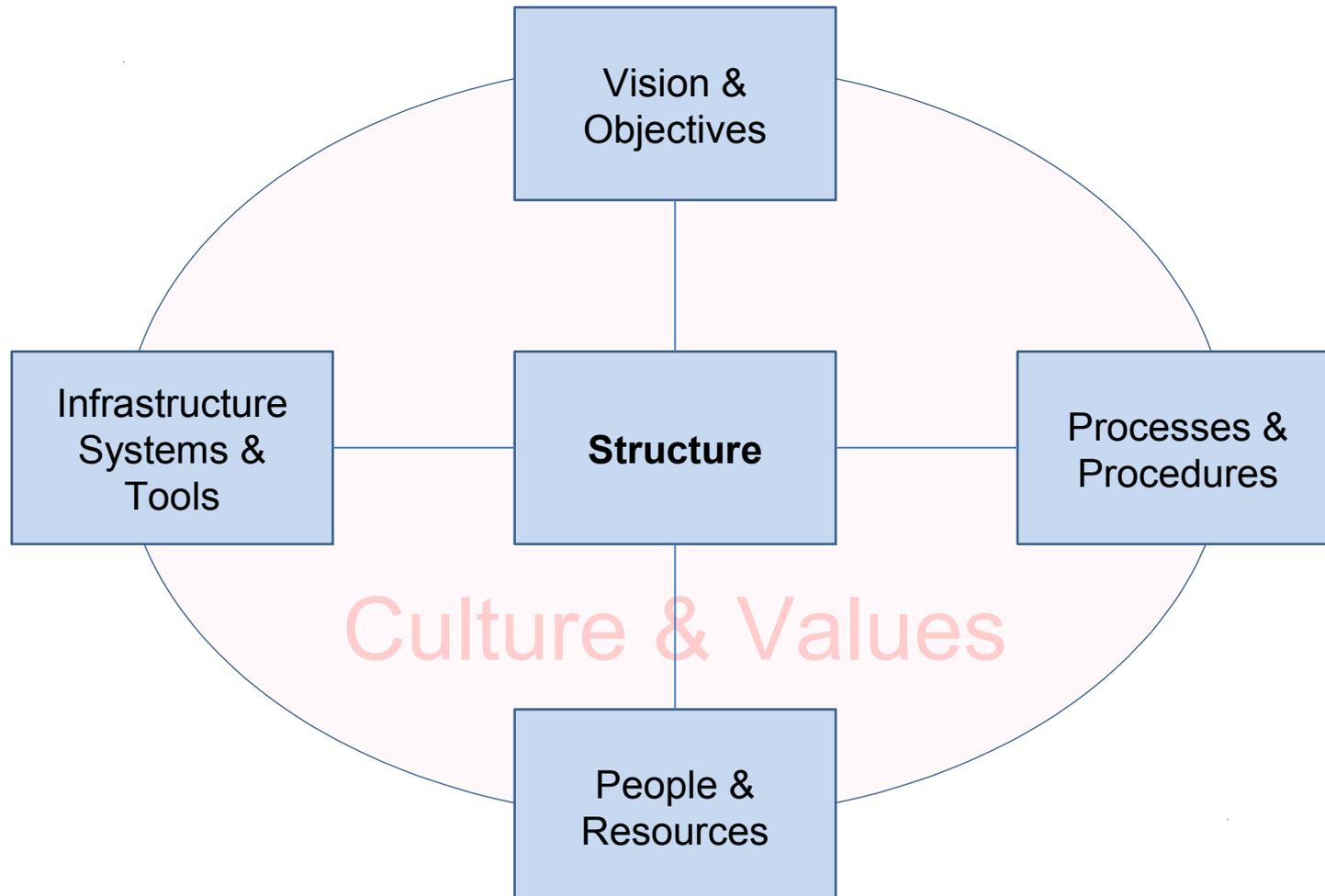
Observations

- ▶ No 1 -- Lack of appropriate effectiveness models and structures
- ▶ No 2 -- Dis – integrated Project Controls
- ▶ No 3 -- Inappropriate levels of detail and unnecessary accuracy
- ▶ No 4 -- A need to better exploit emerging IM/IT technology

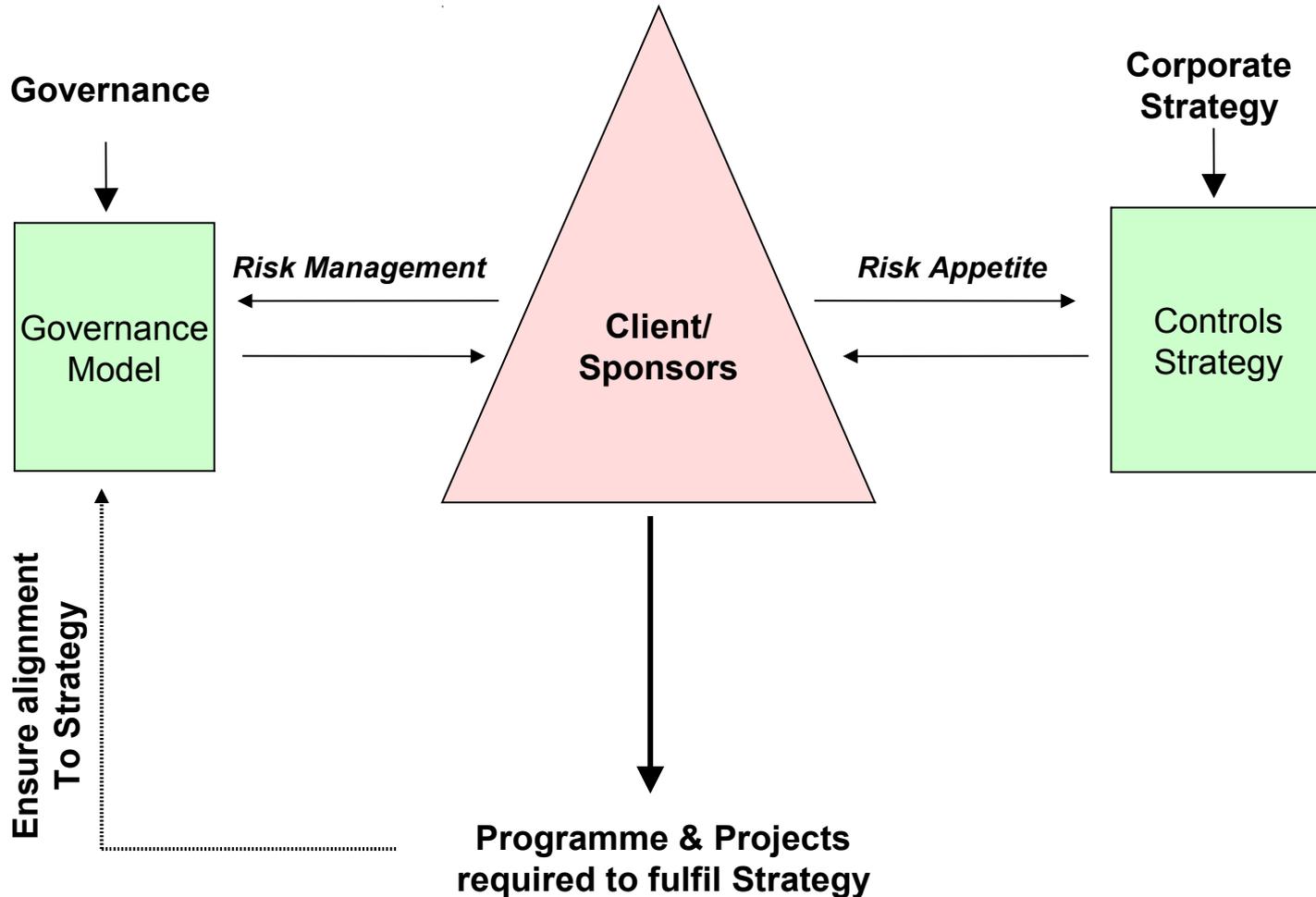
◀ Observation No. 1

- ▶ Programmes & Projects often lack an Organisational Effectiveness framework
- ▶ There is no agreed simple, robust structure – much more than a WBS
- ▶ Scope and structure alignment is left uncontrolled and silo working is rife
- ▶ Controls professionals need to be at the core of projects to drive this

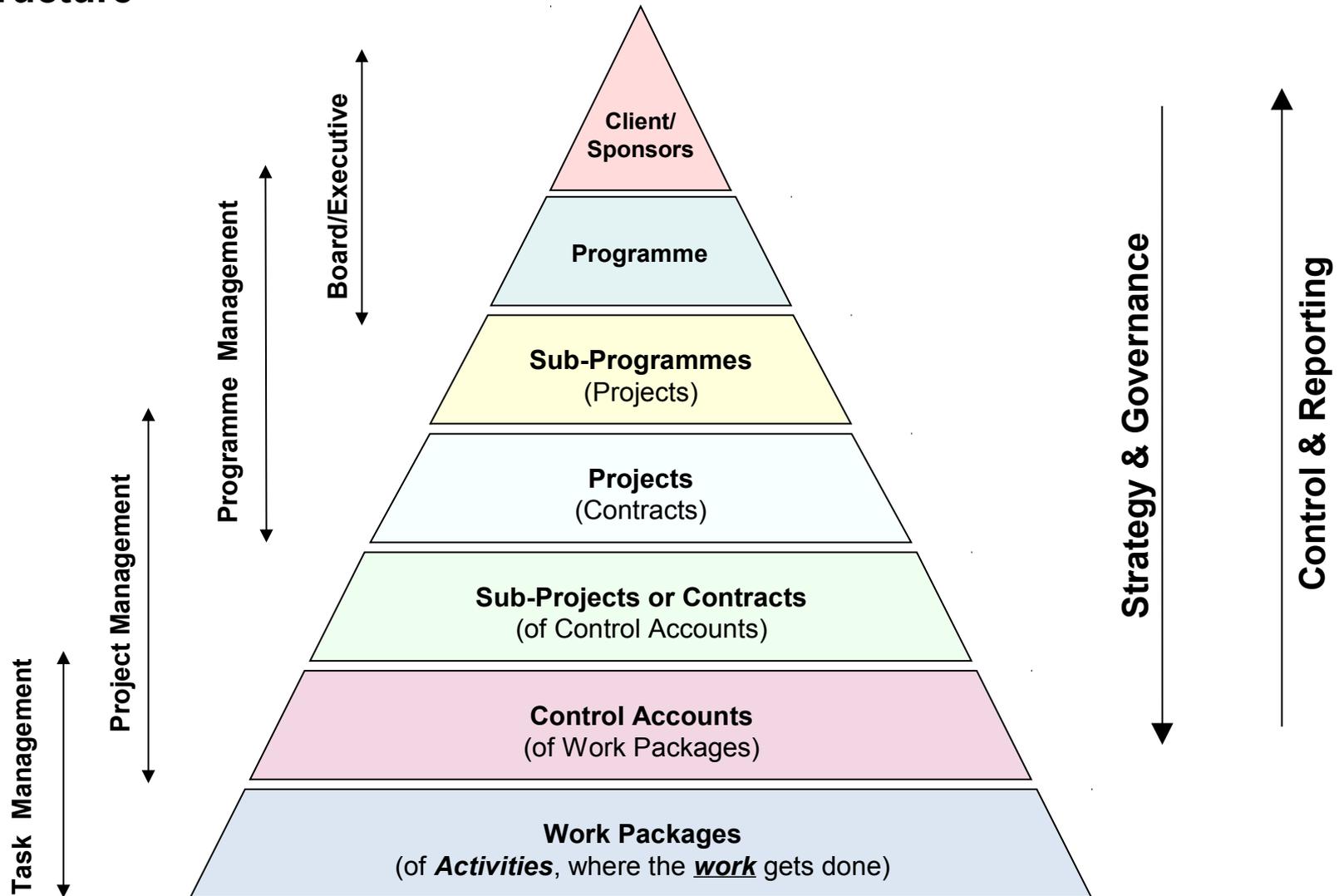
Programme Controls Effectiveness Framework



The 7 Levels of Effective Strategy, Governance & Control



Structure



Structure

- Fundamental – usually not given the attention it requires
- If not well developed and controlled – control will be virtually impossible
- Challenging in early phases – teams prefer flexibility and will resist
- Misalignment occurs vertically and horizontally
- Its for ALL the programme – i.e. not just a WBS (*Typically focused at Levels 5,6 & 7*)

Its all about being in control – NOT – being controlled

◀ Observation No. 2

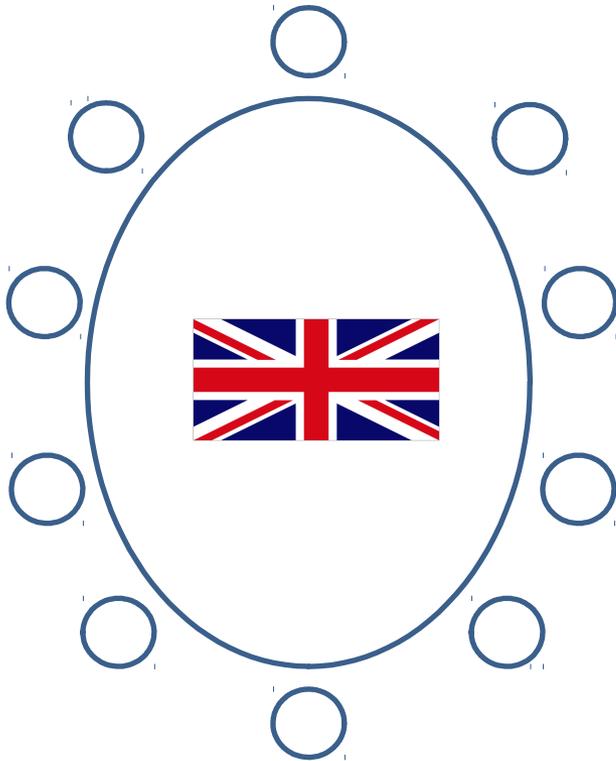
- ▶ Lack of integrated controls – Commercial, Planning, QS's – not joined up
- ▶ Often each discipline has it's own structure, processes etc.
- ▶ They could be working on different projects

◀ Dis - integrated Controls

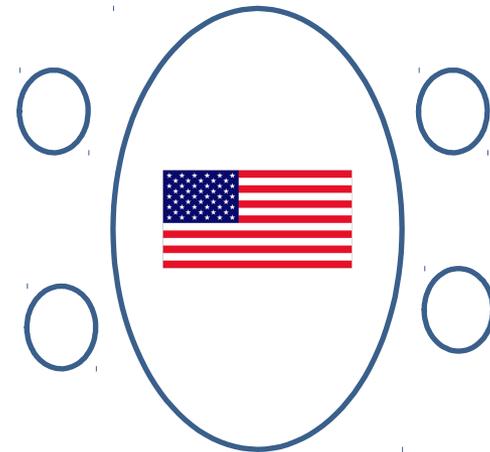
- ▶ What happened to Cost & Schedule Engineering *Ingegneria Economica*
- ▶ Oil & Gas vs. Construction vs. IT -- Worlds apart in approach & capability
- ▶ Procurers, Planners, Estimators, Contract Administrators, Cost Engineers.
- ▶ The UK is too focussed on developing specialists
 - In fact the various Institutions promote this – it's in their interests to do so
 - We produce professionals who know more and more about less and less
- ▶ We need Project Controls professionals – rounded, experienced, multi-skilled
- ▶ We need standards to drive and ensure skills and competence

Glaxo -- Stevenage versus Glaxo -- North Carolina

Same Client, similar approach:
Client Team + PAE + Management Contractor with LS Subs.



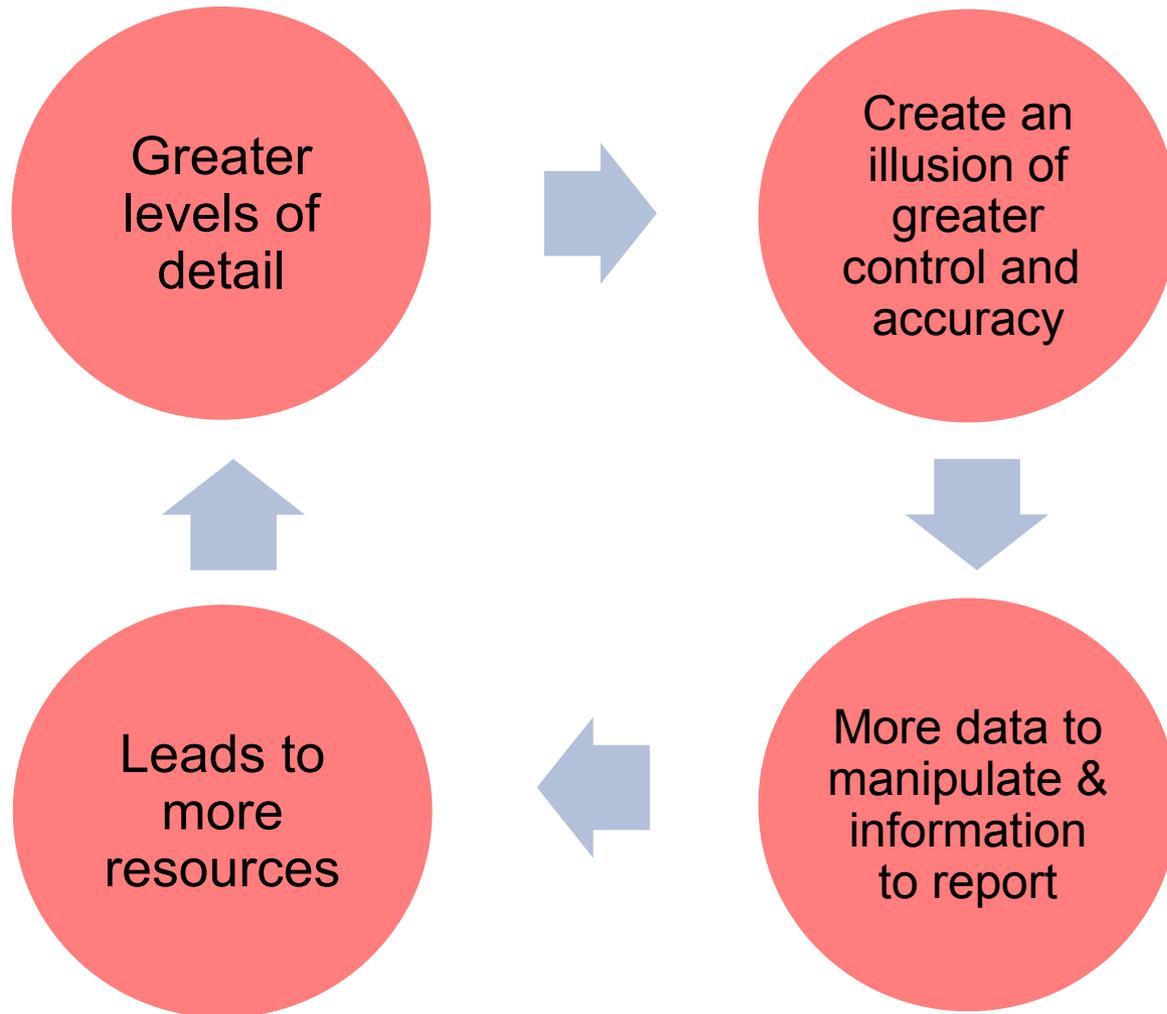
*Typical
Project
Meeting*



One facility cost twice the other – guess which one!

◀ Observation No.3

- ▶ These 3 feed off each other and create a spiral which is difficult to stop
- ▶ 1 --- A drive for more and more detail – does it mean better control ?
e.g. the 10,000 activity costed programme
- ▶ 2 --- An unnecessary quest for decimal point accuracy
e.g. Anticipated Final Cost £10,925,863,253 --- HS2 – Budget £32.1bn
CPI and SPI 0.957, CPI 0.893 – who is fooling who?
- ▶ 3 --- Reports with pages and pages of data and detail – but little analysis
Funders and Sponsors, usually persuaded by academics and government quangos often request excessive levels of information and metrics





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◀ Observation No. 4

- ▶ We must exploit the full power of emerging information technologies
- ▶ BIM and 4, 5 D models
- ▶ Portable devices -- still too much paper
- ▶ Simple to use software – the days of PM tool experts are numbered
- ▶ There are some really good examples, but they are few and far between
- ▶ The petrochem/oil & gas/IT sectors are way ahead of construction

What could it be like in the future

- BIM and 4, 5D -- the virtual project world
- Automated progress measurement using intelligent components
- Smart handover of projects to operators and users
- The capture, cataloguing and Intelligent use of life cycle data
- Realtime reporting instead of month end snapshots
- Clients will expect much more automation and less resources

◀ Summary --- Need to focus on the fundamentals & move forward

- ▶ The application of a robust Strategy, Governance and Control model
- ▶ Need to develop more rounded Project Controls Professionals
- ▶ Need to constantly remind ourselves what the real purpose of controls is
- ▶ Need to develop standards for competency and excellence
- ▶ Really embrace BIM/4 & 5D technology to improve efficiency

◀ So what should we be doing to address these issues

▶ Do all we can to ensure Programme & Project Controls is at the **CORE**

- We are not an add on function or a support function or a PMO
- The pilot/navigator analogy

▶ Carefully consider the level of detail you are getting into

- Challenge – why do you need this – remember the first slide – plan/measure/recover
- We cant change yesterday or today – too long in the rear view mirror causes crashes

▶ We can and should all develop and broaden our skills

- Get involved in other disciplines – planners in cost; QS's in schedules – *radical!*

◀ To conclude --- Have we lost our way?

- ▶ *In some areas, I think we have – but we can easily find it again if we focus on what matters -- the fundamentals*
- ▶ *Put more effort in developing rounded PC Professionals*
- ▶ *Fully exploit information technologies and emerging devices*
- ▶ *And stop wasting precious time, resources and money creating overly complex, too detailed, fragmented controls environments and models which don't provide our Sponsors, Project Directors, Managers and colleagues what they **NEED**. Which is :*

- ▶ *Knowing what has to be done – **the plan***
- ▶ *Understanding the **risks and opportunities** in that plan*
- ▶ *Knowing what has **been done***
- ▶ *Knowing what has **NOT been done** and **why***
- ▶ *Knowing **how performance compares** to the plan*
- ▶ *Recommending **corrective action** to achieve the plan*
- ▶ ***Communicating** it all at the right time, in the right format*



Thanks for listening

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