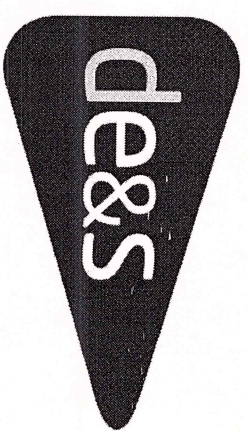
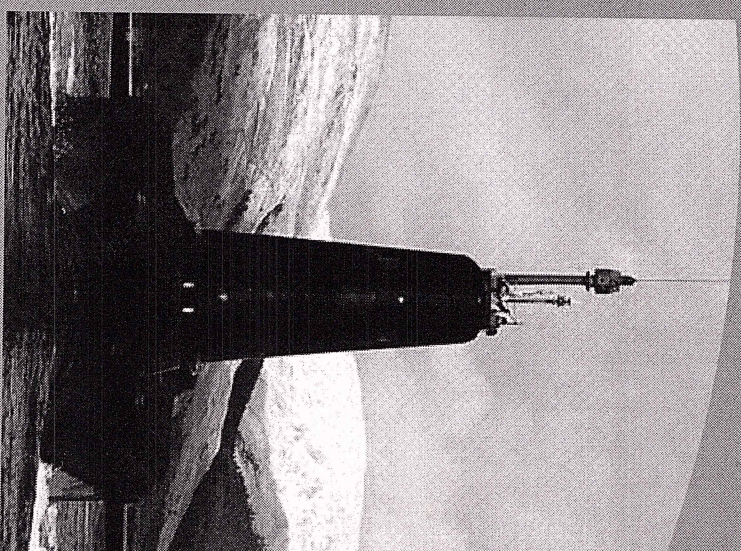




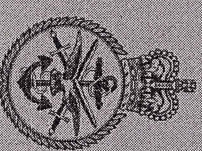
Future Nuclear Deterrent



Challenges to delivery



Rear Admiral Andrew Mathews RN
Director General Submarines

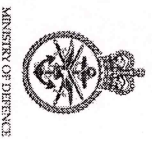
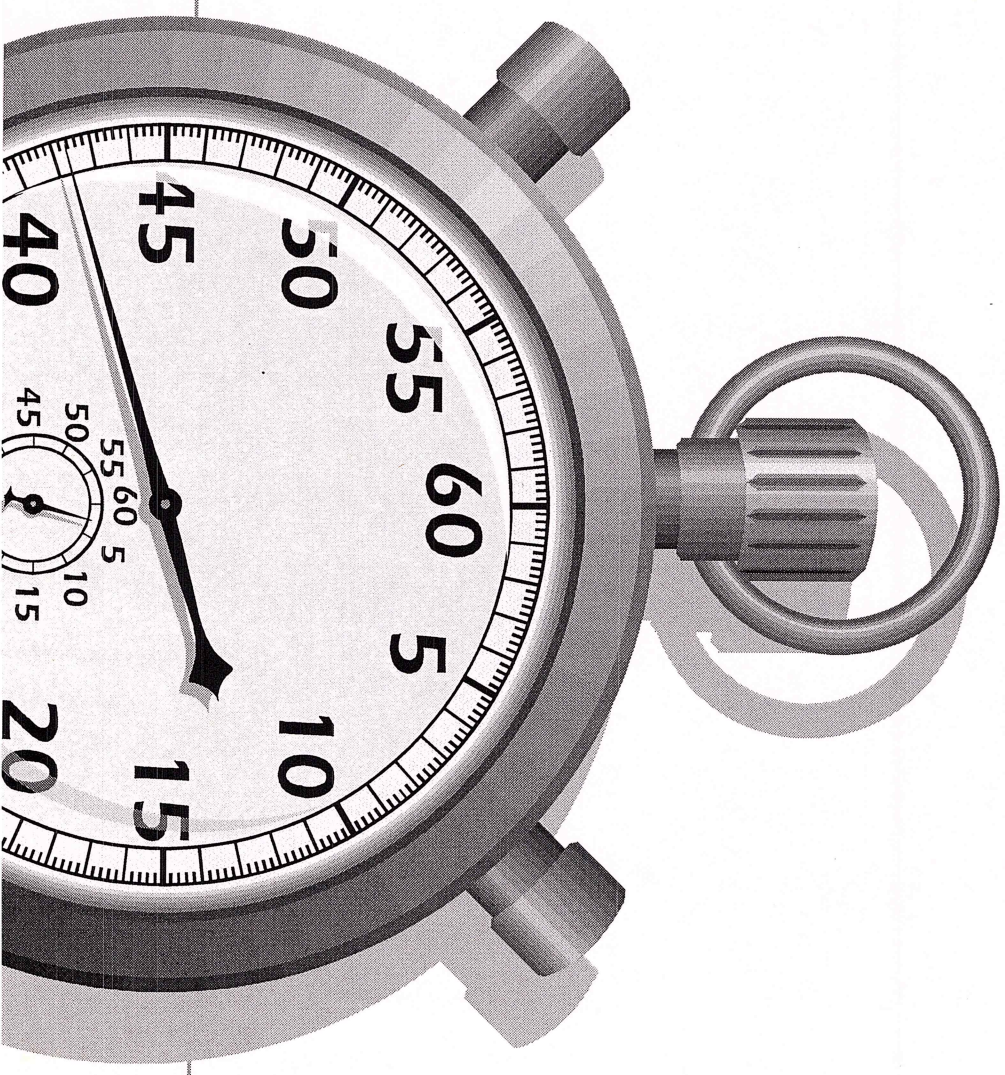


MINISTRY OF DEFENCE

The Overall Challenge

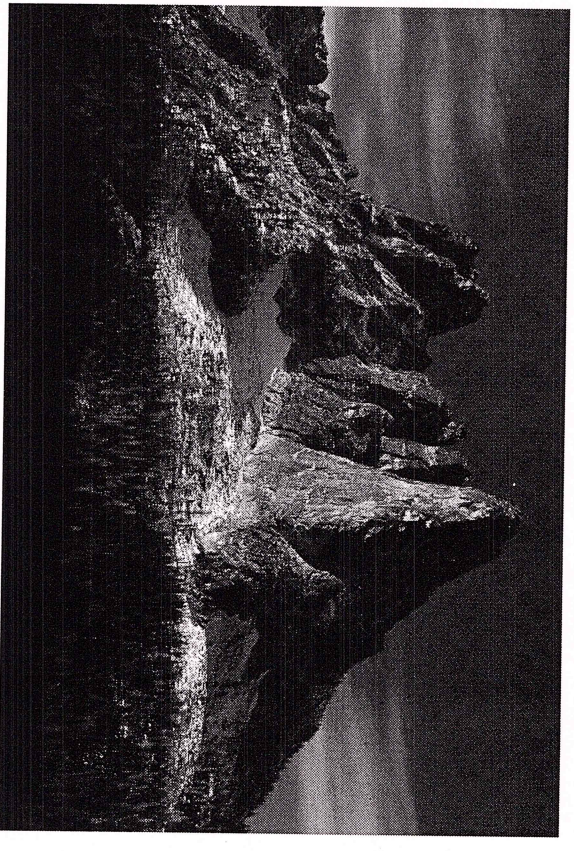
• Time v Innovation

- New SSBN in the water in less than 17 years (1.5% already gone!)
- New Platform
- Longer Life
- New Propulsion System
- Better accommodation
- Flexibility



Key Threats

- Time









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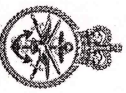
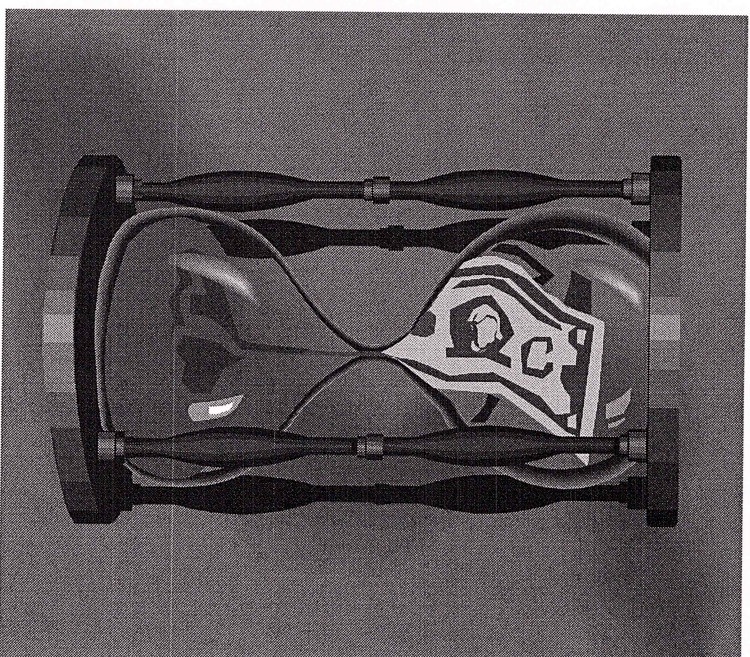


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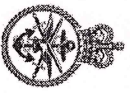
Timetable

- 2024 at Sea
-  s35 on Sea Trials
-  s35 Nuclear Plant Power Trials
-  s35 Construction Starts
-  s35 Long Leads
-  s35 Design Matures
-  s35 High Level Design Spec



Key Threats

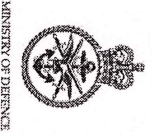
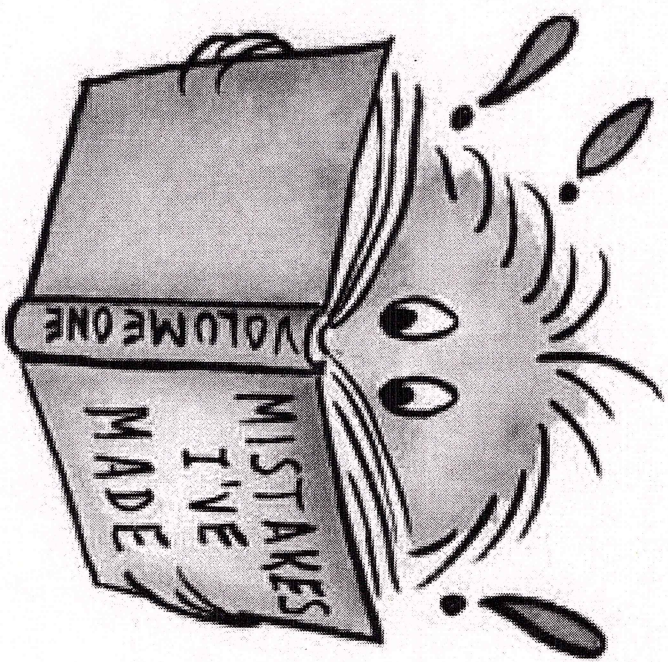
- Time
- Scale
- People and Experience
- Budget
- Ambition
- Frequency



LESSONS

- Contracting method
- MOD's Role
- Risk
- Design Maturity at Construction Start
- Simplicity
- Key Suppliers

What are we doing differently?.....

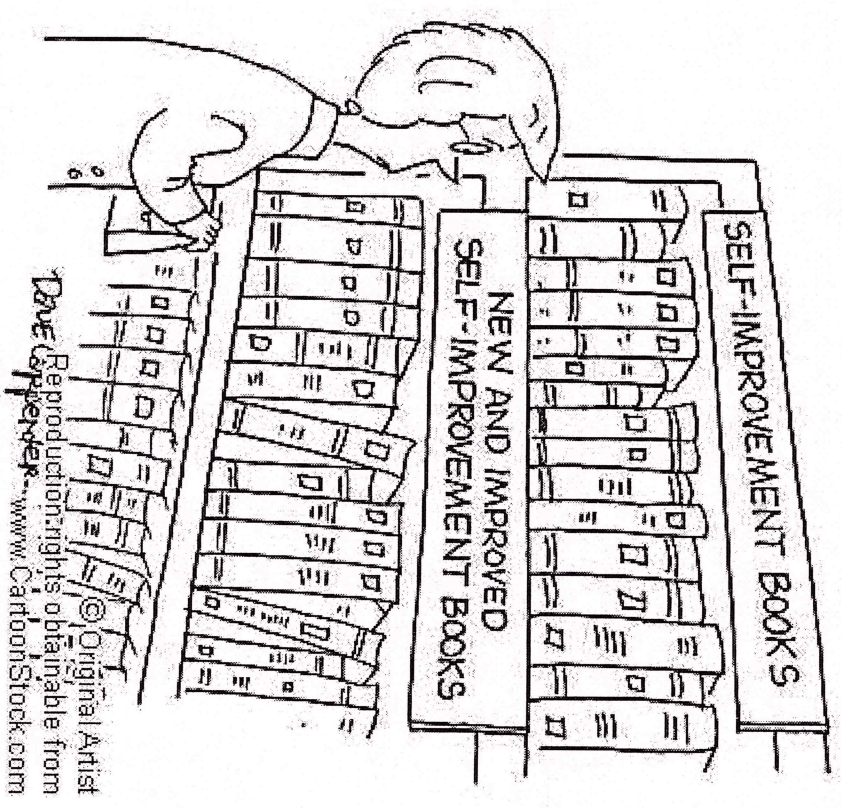


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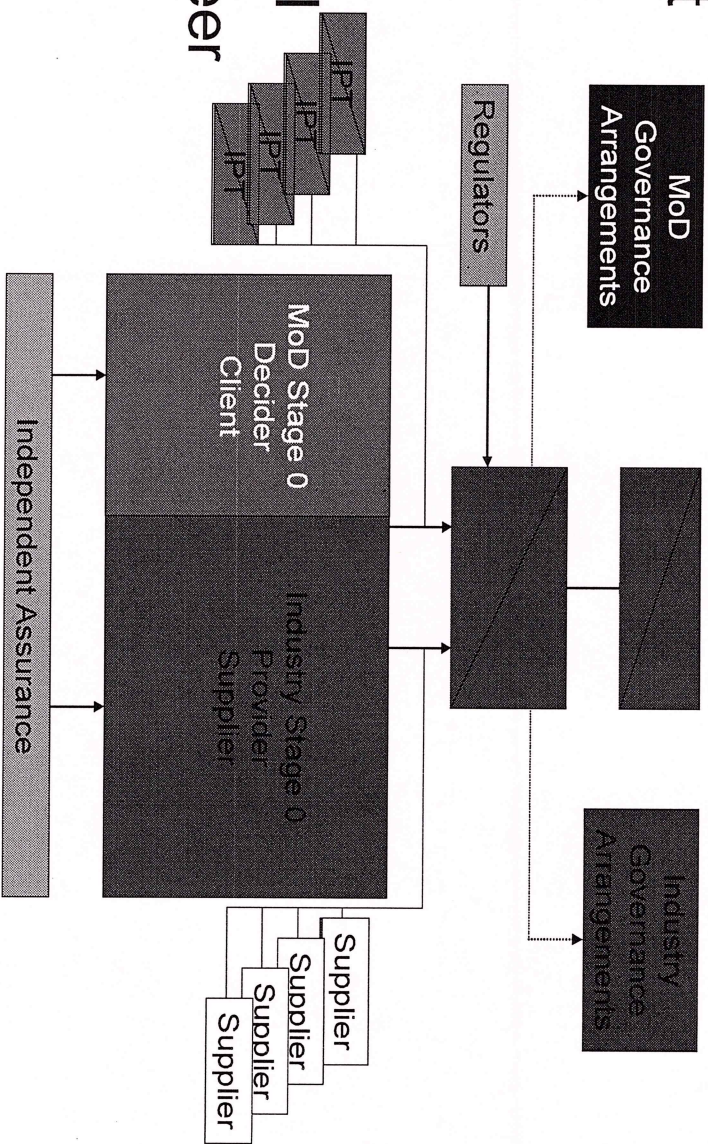
What are we doing differently? *W*

- Utilising Lessons and Best Practice.
- Applying Through Life Management Principles
- Engaging with the Key Suppliers early
- Developing Spiral Development opportunities in the Astute programme
- Exploitation of UK/US technology exchange programme
- Redeveloping MOD as Design Authority



MOD Design Authority

- Selection and recruitment of the best people from across MOD and Industry
- Independent advice and assurance
- Industry support essential
- Establishing Chief Engineer and Safety Director



Challenges:

Engineering

- Simplicity
- Challenge the norm
- COTS
- Spiral Development
- Through Life
- Efficiency



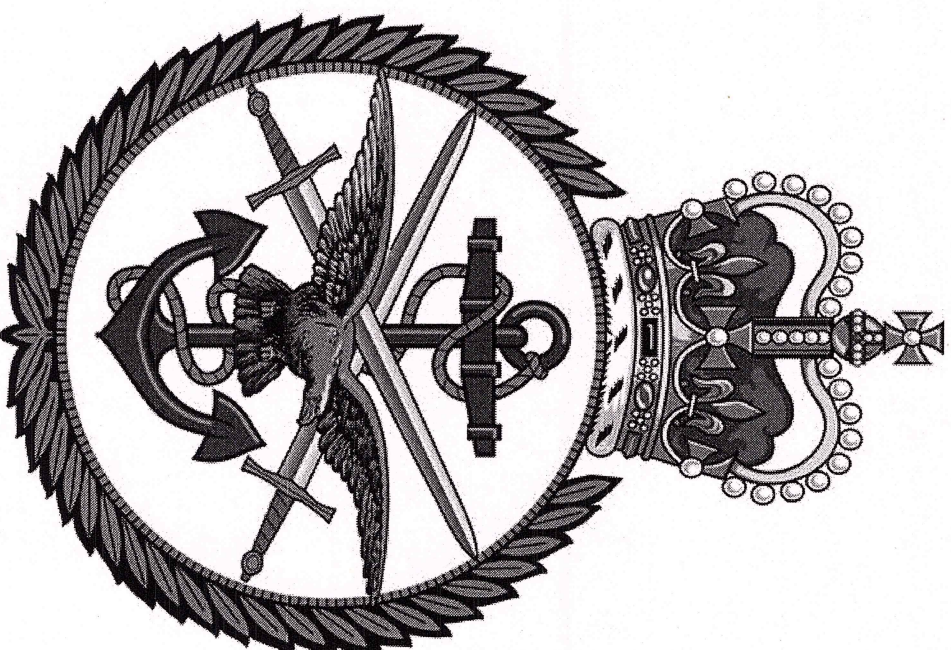
Process

- Collaboration
- Key Supplier Forum
- Information Exchange
- Skills Exchange



What MOD has to do

- Work With Industry
- Do better Commercially
- Invest in People / Create Continuity
- Work at Pace
- Learn from Experience



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What do we want industry to do?

- Collaborative Working
- Innovation
- Remove Obstacles to Working at Pace
- Learn from Experience
- Continuous Improvement

