



The United Kingdom's Outer Space Act

Prof Richard Crowther
Chief Engineer, UK Space Agency

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Outline

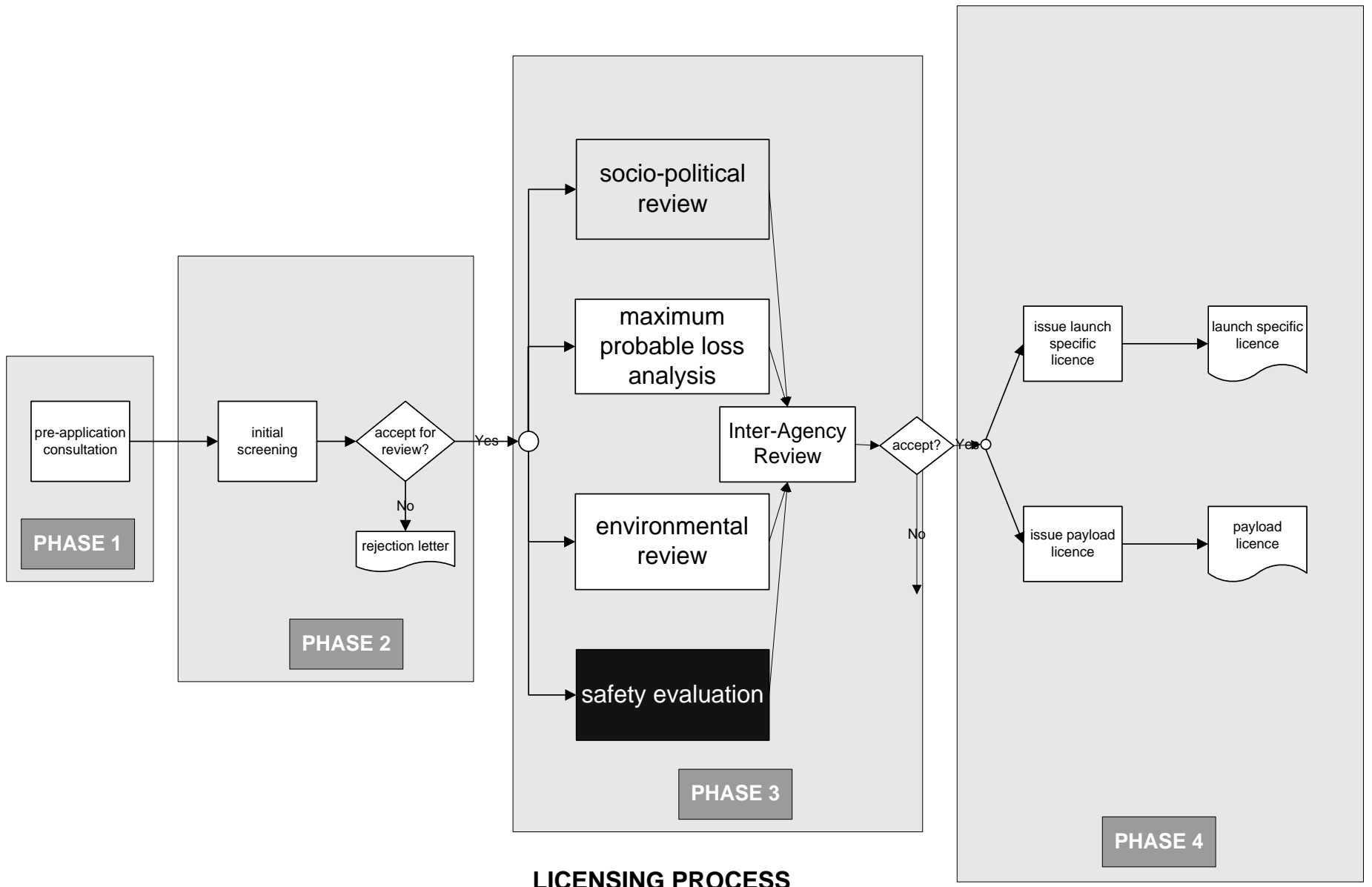
- **Outer Space Act**
- **Licensing Process and Technical Evaluation**
- **Practical Implementation**
- **Way Forward**

UK Outer Space Act, 1986

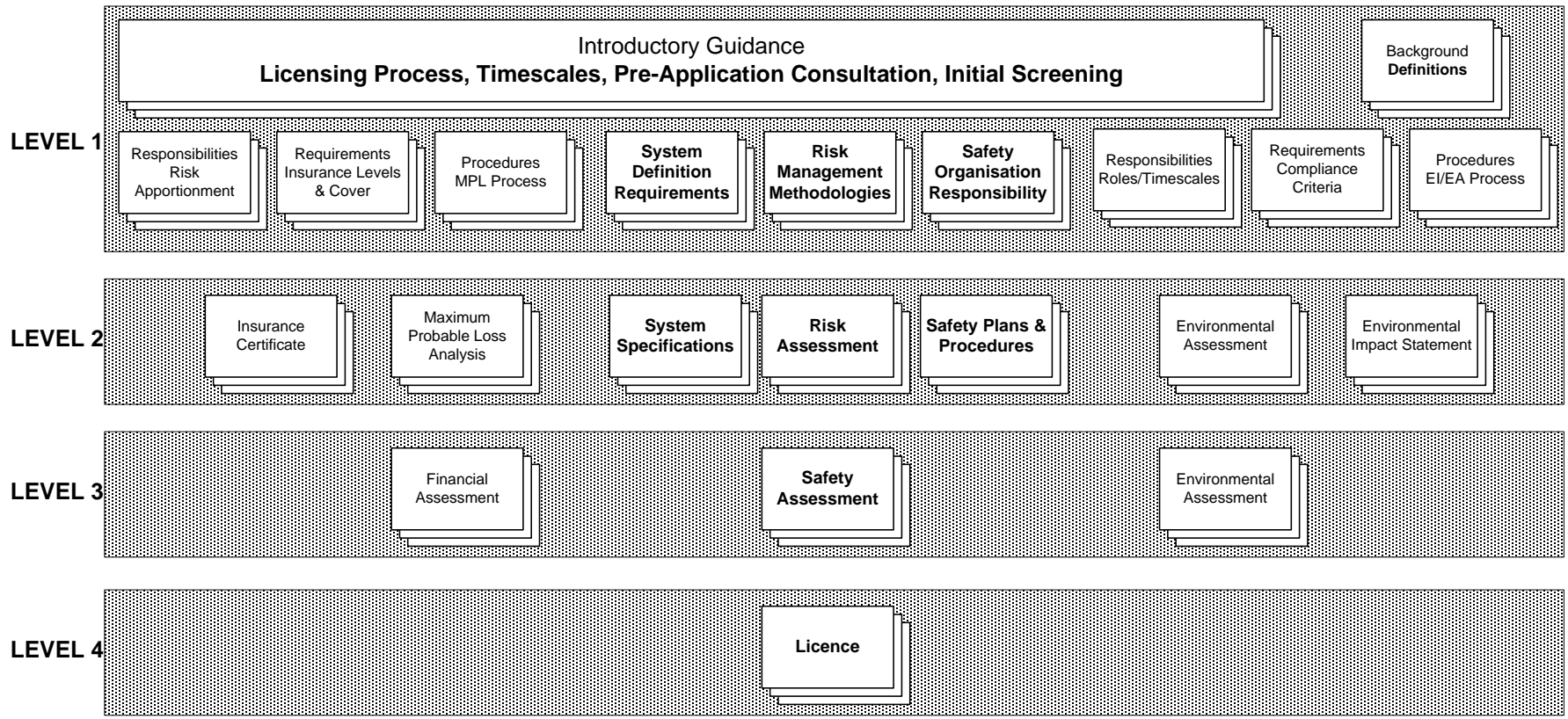
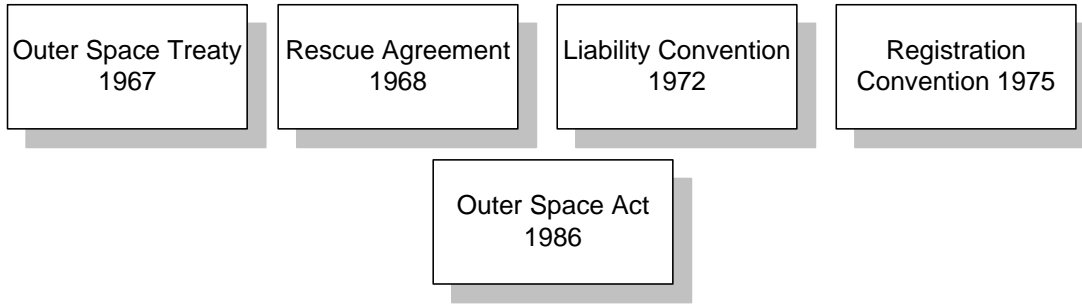
- Statutory instrument addressing UK obligations under the international space treaties:
 - Outer Space Treaty (1967)
 - Rescue Agreement (1968)
 - Liability Convention (1972)
 - Registration Convention (1975)
- Confers licensing powers on the Secretary of State

Licensing Authority (UKSA)

- **Secretary of State shall not grant a licence unless he is satisfied that the activities authorised by the licence will:**
 - not jeopardise public health or the safety of persons or property
 - will be consistent with the international obligations of the United Kingdom
 - will not impair the national security of the United Kingdom
- **Further the Secretary of State requires the licensee to conduct his operations in such a way as to:**
 - prevent the contamination of outer space
 - adverse changes in the environment of the Earth
 - avoid interference with activities of others in the peaceful exploration and use of outer space



LICENSING PROCESS



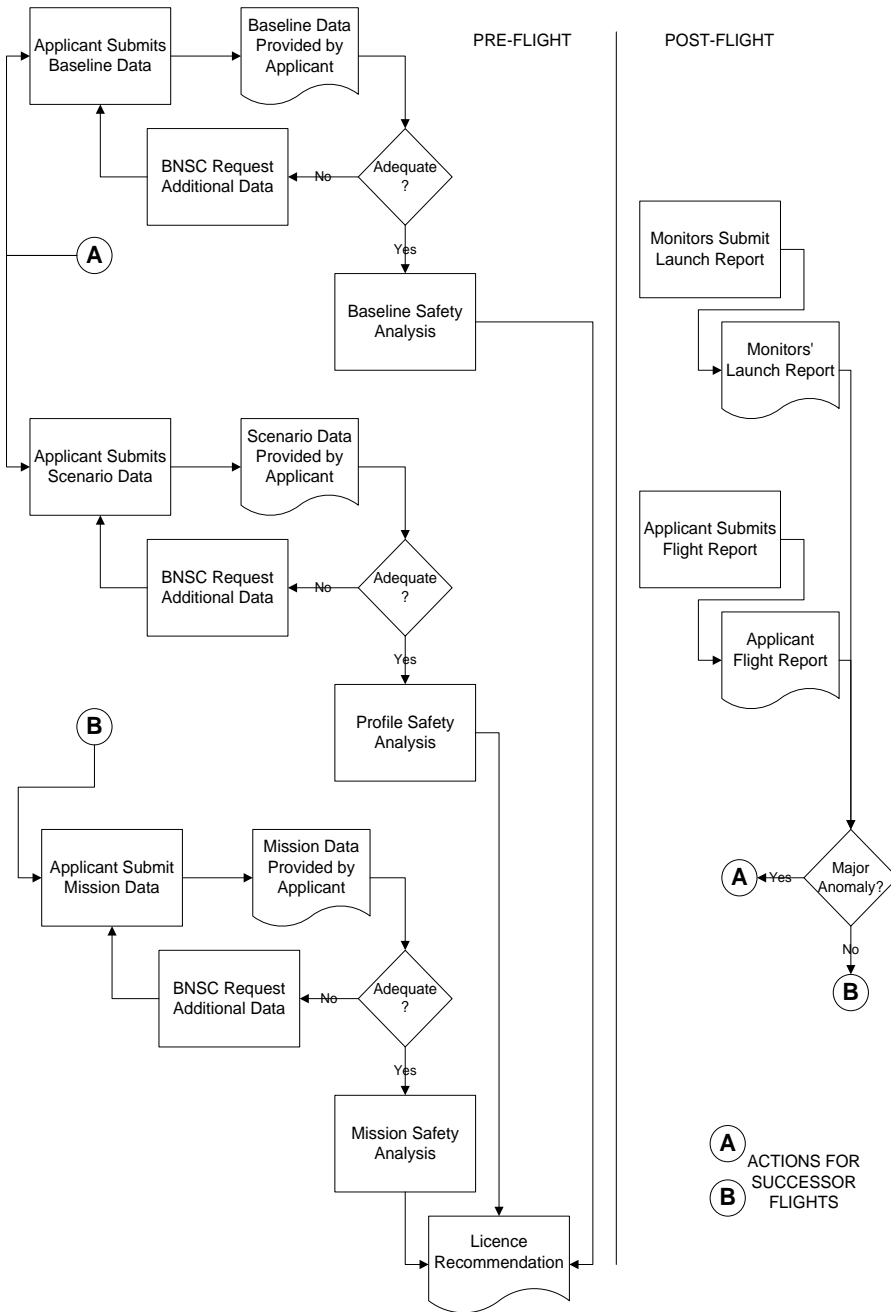
LICENCING DOCUMENTATION HIERARCHY

Documentation Approach

- **Level 1**
 - Guidance documents available to applicant
- **Level 2**
 - Data submissions made by applicant
- **Level 3**
 - Assessment documents based on submitted data
- **Level 4**
 - Notification of outcome (and licence)
- **Clear audit trail between criteria, mission spec., evaluation, and decision**

Use of Scenarios To Streamline Process

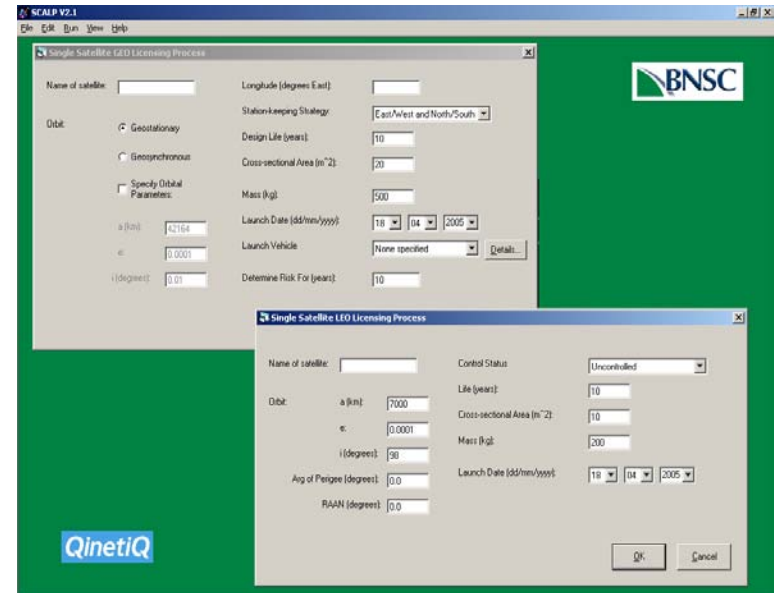
- **High cost of licence assessment**
- **Repeat applications tend to use same information so need process to re-use data if possible & use exception reporting**
- **Use Scenario Approach**
 - **Baseline: first flight of vehicle**
 - **Profile: first flight for particular profile/derivative**
 - **Mission: repeat of previously successful profile**



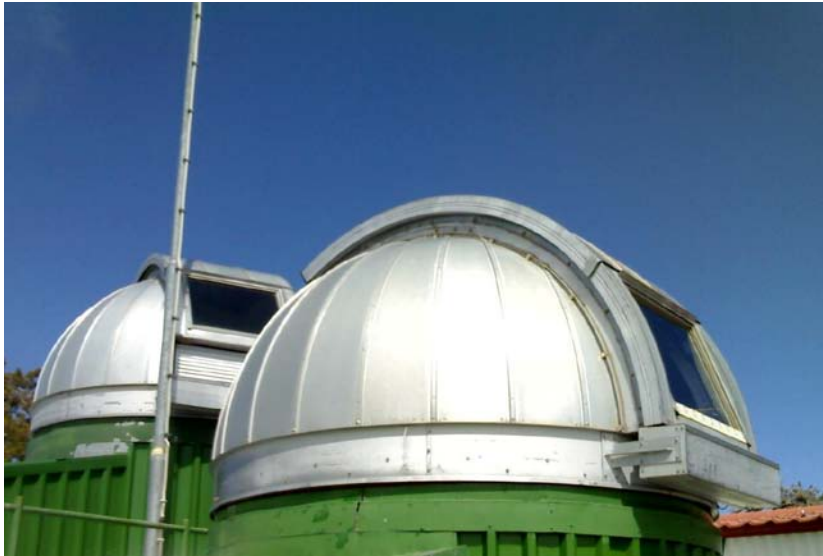
	BASELINE	PROFILE	MISSION
GEO1	✓		
GEO2		✓	
ME01		✓	
GEO3			✓
ME02			✓
GEO3			✓
LE01		✓	ANOMALY
GEO4	✓		

Models and Tools

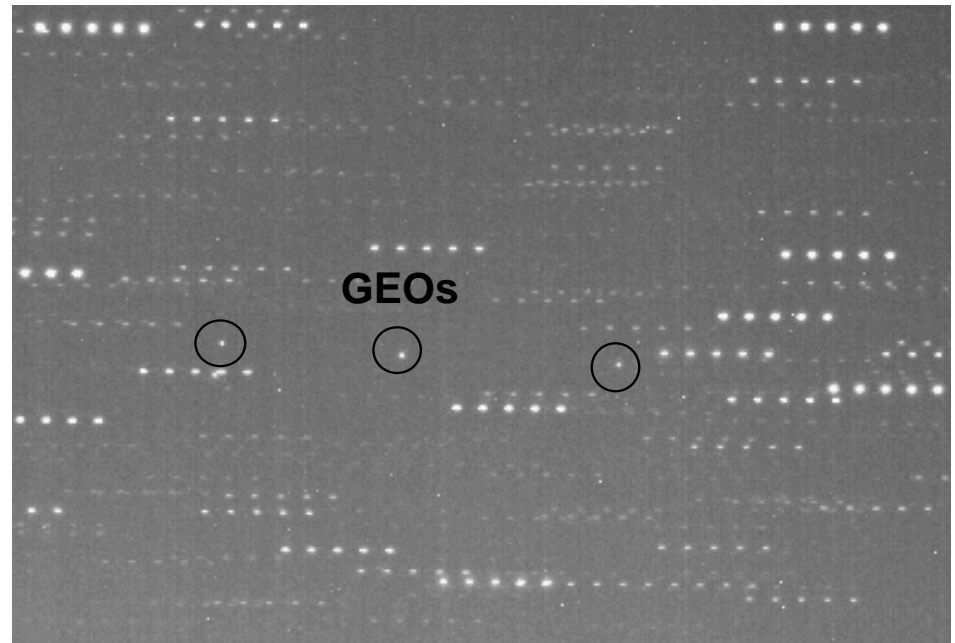
- **Satellite Collision Assessment for the UK Licensing Process (SCALP)**
- **Investigations into effect of proposed satellite operations**
- **LEO and GEO regions**
- **Operational orbit (excludes orbit acquisition and any de-orbit / re-orbit manoeuvre)**
- **Overall assessment of collision risk licence applicant's payload poses to current on-orbit population**
- **Supported by monitoring of the GEO ring of UK Registry objects**



Compliance Monitoring



Starbrook operation by Space Insight commissioned by BNSC in 2006 to monitor UK registered space objects in GEO



Criteria for Evaluation

- **Best Practice (Qualitative and Quantitative)**
 - International
 - European
 - National
 - National Agency (e.g. MOD)
 - National (Other state)
- **Standards**
 - ISO/ECSS/PSS/BSI
- **Guidelines/Codes/Recommendations**
 - UN/ITU/IADC/ESA

Way Forward

- **Harmonisation of evaluation criteria through development of consensus measures**
- **Emergence of credible Space Plane systems present a challenge to OSA implementation**
- **“Long Term sustainability of space activities” initiative at UNCOPUOS welcomed, expected to help to inform UK licensing process**
- **Issues surrounding transfer of ownership in orbit**
- **Recently reduced insurance requirement to 60MEu**
- **Modifying Act to remove unlimited liability burden on industry**
- **More info: www.ukspaceagency.bis.gov.uk**